

# **NOTIFICATION OF ADDENDUM**

## **ADDENDUM NO. 2**

**DATED 5/02/2011**

<b>Control</b>	<b>0231-19-002, ETC.</b>
<b>Project</b>	<b>DMO 2011(997), ETC.</b>
<b>Highway</b>	<b>US 190</b>
<b>County</b>	<b>CORYELL, ETC.</b>

Ladies/Gentlemen:

Attached please find an addendum on the above captioned project. Included in the attachment is an addendum notification which details the changes and the respective proposal pages which were added and/or changed.

Except for new bid insert pages, it is unnecessary to return any of the pages attached.

Bid insert pages must be returned with the bid proposal submitted to the Department, unless your firm is submitting a bid using a computer print out. The computer print out must be changed to reflect the new bid item information.

Contractors and material suppliers, etc. who have previously been furnished informational proposals are not being furnished a copy of the addendum. If you have a subcontractor on the above project, please advise them of this addendum. Acknowledgment of this addendum is not requested if your company has been issued a proposal stamped "This Proposal Issued for Informational Purposes."

You are required to acknowledge receipt of this addendum on the Addendum Acknowledgement form contained in your bid proposal by placing a mark in the box next to the respective addendum.

Failure to Acknowledge receipt of this addendum in your bid proposal will result in your bid not being read.

SUBJECT: PLANS AND PROPOSAL ADDENDUMS

PROJECT: DMO 2011(997)

CONTROL: 0231-19-002

COUNTY: CORYELL

LETTING: 05/04/2011

REFERENCE NO: 0426

**PROPOSAL ADDENDUMS**

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\_ PROPOSAL COVER

X BID INSERTS (SH. NO.: 1,2,4,5,12,15,16,18,26)

X GENERAL NOTES (SH. NO.: A-SS)

X SPEC LIST (SH. NO.: 1,2,3,5)

\_ SPECIAL PROVISIONS:

ADDED:

DELETED:

X SPECIAL SPECIFICATIONS:

ADDED:

DELETED: 5783

X OTHER: Plans 2,3,5,5A-V,6,6A-M,63,63A,422,423,592A-M,759,760,862,863,  
907,1019K-AA,1021,1022,1216-1320,1321

DESCRIPTION OF ABOVE CHANGES

(INCLUDING PLANS SHEET CHANGES)

**Bid Inserts**

\*\*\*\*\*  
REPLACE ALL BID INSERTS. Several bid items added and list has shifted.  
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Page 1 Add 110-2003, 132-2006, and 160-2004.  
Revise 164-2035 and 164-2043.

Page 2 Add Item 180-2001.  
Revise 169-2001.

Page 4 Revise 402-2001.

Page 5 Add Item 416-2020.

Page 12 Add 506-2048.  
Revise 506-2003, 506-2009, and 506-2034.

Page 15 Add 550-2003, 550-2006 550-2020, 550-2047, and 556-2009.

Page 16 Add Item 620-2009.  
Revise Items 618-2052 and 624-2008.

Page 18 Add Item 650-2118.

Page 26 Add 5779-2015, 5779-2016.  
Revise 5779-2008.  
Delete Item 5783-2001.

DESCRIPTION OF ABOVE CHANGES

(CONTINUED)

(INCLUDING PLANS SHEET CHANGES)

## General Notes

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\*\*\*\*\* Several changes to General Notes. REPLACE ALL.\*\*\*\*\*  
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Pages MM to SS are new pages due to expanded General Notes.

Page A Project funding statement changed.

Page B has table revisions for Wildflower Seeding.

Page C New section. "General Waste and Excavation Operations Plan."

General Notes Sections where changes have been made are:

Item 7 Revised.

Item 8 Revised to provide substantial completion date before the disincentives are applied. Misc corrections made.

Item 100 Misc corrections made. Station limits for landfill remediation.

Items 110 and 132 Additional subgrade information.

Item 132 Embankment criteria information.

Item 134 Section deleted.

Item 160 Misc corrections. Contractor responsible for soil test on off-ROW topsoil.

Item 164 Added information for grading, stabilization, temp seeding for unused topsoil stockpiles, and watering perm seeding.

Item 180 New information for wildflower seeding.

Items 192 and 193 Include landscape planting and establishment in Contractor's Work Schedule.

Item 247 RAP paragraph removed.

Item 251 Stockpile salvaged material.

Item 276 Misc revisions.

Item 305 Stockpiling RAP and restricted RAP for this project.

Item 316 Date range for asphalts provided.

Item 360 Paving Plan and Ride Quality information added.

Item 420 Junction boxes, formwork, mock-up requirements.

Items 420, 423, 450, and 514 New information section.

Item 423 Sample and Texas emblem information added.

Item 427 Repaired and patched members, vegetation establishment, plastic sheeting.

Item 502 Type III barricade placement and flagger station lighting.

Item 504 Broadband revised speed required. Furnish water fountain.

Item 506 Temporary diversion berms and leachate control.

Item 508 Removal of detours information.

Item 550 New section for chain link fence.

Item 556 New section. Pipe underdrain information.

Item 585 Ramps added.

Item 610 Added junction boxes, illumination pole fabrication.

Item 620 Loop detectors, conductors allowed, misc corrections.

Item 644 Section has been revised and replaced.

Item 650 New section.

Item 672 Existing marker removal deleted. Traffic buttons for intersection radii.

Item 740 Payment for anti-graffiti coating defined.

Item 3224 RAP sources, MTV use, and TxG lab-molded density.

Items 5777 and 5779 New section regarding the local utility

relocations.  
DESCRIPTION OF ABOVE CHANGES  
(INCLUDING PLANS SHEET CHANGES)

(CONTINUED)

Item 6834 Furnish 4 portable changeable message signs.

Spec List

Page 1 Add Item 180.  
Page 2 Add Item 550.  
Page 3 Add Item 650.  
Page 5 Remove Item 5783.

Plans

Sheets 2,3,422,423,759,760,1021,1022 Index sheets. Revisions at  
Vol.I.I.General, Vol.II.VI.Utilities, Vol.III. Water and  
Sewer, and Vol.IV.X.Miscellaneous Items.  
Sheets 5,5A-V General Notes. Changes listed above.  
Sheets 5S to 5V are new with expanded Notes.  
Sheets 6,6A-M Estimate and Quantity sheets. List shifted by changes  
described above.  
Sheet 6M Contractor Force Accounts added for Police; and Waste  
Excavation, Relocation, and Landfill Remediation.  
Sheet 63 Basis of Work notes added.  
Sheet 63A New sheet. Landfill Summary.  
Sheets 592A-M New sheets. PAETEC "Fiber Optic Cable Route."  
Sheets 862,863 Item 650 added to sheet quantity information.  
Sheet 907 EPIC sheet revised as noted.  
Sheets 1019K-AA New sheets. City of Copperas Cove Utility Relocation  
Sheets 1216-1320 New sheets. "General Waste Excavation Operations  
Plan."  
Sheet 1321 New sheet. Fence.

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	100	2002	002	PREPARING ROW  DOLLARS CENTS and	STA	298.000	1
	104	2010		REMOVING CONC (RIPRAP)  DOLLARS CENTS and	CY	26.000	2
	104	2031		REMOVING CONC (HEADWALL)  DOLLARS CENTS and	CY	46.000	3
	110	2001		EXCAVATION (ROADWAY)  DOLLARS CENTS and	CY	1,154,725.00	4
	110	2002		EXCAVATION (CHANNEL)  DOLLARS CENTS and	CY	1,539.000	5
	110	2003		EXCAVATION (SPECIAL)  DOLLARS CENTS and	CY	110,000.000	6
	132	2004		EMBANKMENT (FINAL)(DENS CONT)(TY B)  DOLLARS CENTS and	CY	1,106,639.00	7
	132	2006		EMBANKMENT (FINAL)(DENS CONT)(TY C)  DOLLARS CENTS and	CY	23,973.000	8
	160	2003		FURNISHING AND PLACING TOPSOIL (4")  DOLLARS CENTS and	SY	647,181.000	9
	160	2004		FURNISHING AND PLACING TOPSOIL (6")  DOLLARS CENTS and	SY	50,300.000	10
	162	2002		BLOCK SODDING  DOLLARS CENTS and	SY	991.000	11

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	164	2035	004	DRILL SEEDING (PERM) (RURAL) (CLAY) DOLLARS and CENTS	SY	678,531.000	12
	164	2041	004	DRILL SEEDING (TEMP) (WARM) DOLLARS and CENTS	SY	323,598.000	13
	164	2043	004	DRILL SEEDING (TEMP) (COOL) DOLLARS and CENTS	SY	340,298.000	14
	168	2001		VEGETATIVE WATERING DOLLARS and CENTS	MG	21,061.000	15
	169	2001	002	SOIL RETENTION BLANKETS (CL 1) (TY A) DOLLARS and CENTS	SY	84,438.000	16
	169	2003	002	SOIL RETENTION BLANKETS (CL 1) (TY C) DOLLARS and CENTS	SY	422.000	17
	169	2007	002	SOIL RETENTION BLANKETS (CL 2) (TY G) DOLLARS and CENTS	SY	10,188.000	18
	180	2001		WILDFLOWER SEEDING DOLLARS and CENTS	AC	70.000	19
	192	2023		PLANT MATERIAL (15 GAL) (TREE) DOLLARS and CENTS	EA	153.000	20
	193	2001		PLANT MAINTENANCE DOLLARS and CENTS	MO	9.000	21
	193	2006		VEGETATIVE WATERING DOLLARS and CENTS	MG	103.000	22

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	ITEM NO	DESC CODE	S.P. NO.				
	216	2001		PROOF ROLLING  DOLLARS and CENTS	HR	30.000	23
	247	2056	040	FL BS (CMP IN PLC)(TY D GR 4)(FNAL POS) DOLLARS and CENTS	CY	59,244.000	24
	251	2049		REWRK BS MTL(TY C)(6")(ORD COMP)(STKPL) DOLLARS and CENTS	CY	285.000	25
	251	2153		REWORK BS MTL (TY C) (7") (STKPL)(OC) DOLLARS and CENTS	CY	3,941.000	26
	251	2192		REWRK BS MTRL(TY C)(12")(OC)(STKPL) DOLLARS and CENTS	CY	535.000	27
	276	2108		CM TRT(PT MX)(CL N)(TY D)(GR 4)(FN POS) DOLLARS and CENTS	CY	2,435.000	28
	305	2002		SALV, HAUL & STKPL RCL APH PV (0 TO 2") DOLLARS and CENTS	SY	23,926.000	29
	305	2004		SALV, HAUL & STKPL RCL APH PV (4 TO 6") DOLLARS and CENTS	SY	1,604.000	30
	310	2005		PRIME COAT (MC-30 OR AE-P) DOLLARS and CENTS	GAL	45,163.000	31
	316	2022	016	ASPH (HFRS-2 OR CRS-2) DOLLARS and CENTS	GAL	87,548.000	32

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	ITEM NO	DESC CODE	S.P. NO.				
	316	2363	016	AGGR (TY-PD GR-4 OR TY-PL GR-4)(SAC-B) DOLLARS and CENTS	CY	82.000	33
	316	2415	016	AGGR (TY-D GR-4 OR TY-L GR-4)(SAC-C) DOLLARS and CENTS	CY	1,669.000	34
	316	2616	016	ASPH(AC-15P,AC-20XP,AC10-2TR,AC-12-5TR) DOLLARS and CENTS	GAL	3,585.000	35
	360	2002	003	CONC PVMT (CONT REINF-CRCP)(9") DOLLARS and CENTS	SY	16,868.000	36
	400	2005		CEM STABIL BKFL DOLLARS and CENTS	CY	2,637.500	37
	402	2001		TRENCH EXCAVATION PROTECTION DOLLARS and CENTS	LF	6,194.000	38
	403	2001		TEMPORARY SPL SHORING DOLLARS and CENTS	SF	1,232.000	39
	416	2001	001	DRILL SHAFT (18 IN) DOLLARS and CENTS	LF	578.000	40
	416	2003	001	DRILL SHAFT (30 IN) DOLLARS and CENTS	LF	270.000	41
	416	2004	001	DRILL SHAFT (36 IN) DOLLARS and CENTS	LF	3,333.000	42
	416	2005	001	DRILL SHAFT (42 IN) DOLLARS and CENTS	LF	244.000	43



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	ITEM NO	DESC CODE	S.P. NO.				
	416	2006	001	DRILL SHAFT (48 IN)  DOLLARS CENTS and	LF	172.000	44
	416	2007	001	DRILL SHAFT (54 IN)  DOLLARS CENTS and	LF	621.000	45
	416	2008	001	DRILL SHAFT (60 IN)  DOLLARS CENTS and	LF	784.000	46
	416	2018	001	DRILL SHAFT (SIGN MTS)(24 IN)  DOLLARS CENTS and	LF	94.000	47
	416	2020	001	DRILL SHAFT (SIGN MTS)(36 IN)  DOLLARS CENTS and	LF	192.000	48
	416	2029	001	DRILL SHAFT (RDWY ILL POLE) (30 IN)  DOLLARS CENTS and	LF	351.000	49
	420	2003	002	CL C CONC (ABUT)  DOLLARS CENTS and	CY	537.400	50
	420	2019	002	CL C CONC (CAP)  DOLLARS CENTS and	CY	726.600	51
	420	2025	002	CL F CONC (FOOTING)(MASS PLACEMENT)  DOLLARS CENTS and	CY	177.800	52
	420	2033	002	CL S CONC (APPR SLAB)  DOLLARS CENTS and	CY	599.000	53
	420	2051	002	CL C CONC (COLUMN)  DOLLARS CENTS and	CY	941.000	54

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	ITEM NO	DESC CODE	S.P. NO.				
	420	2055	002	CL C CONC (COLUMN)(MASS PLACEMENT) DOLLARS and CENTS	CY	904.500	55
	420	2059	002	CL C CONC (CAP)(MASS PLACEMENT) DOLLARS and CENTS	CY	108.000	56
	422	2001		REINF CONC SLAB DOLLARS and CENTS	SF	203,783.000	57
	423	2001		RETAINING WALL (MSE) DOLLARS and CENTS	SF	16,986.000	58
	423	2010		RETAINING WALL (ROCK NAILED)(FACIA) DOLLARS and CENTS	SF	25,043.000	59
	425	2019	001	PRESTR CONC U-BEAM (U54) DOLLARS and CENTS	LF	7,950.040	60
	425	2068	001	PRESTR CONC GIRDER (TX54) DOLLARS and CENTS	LF	8,320.560	61
	428	2002	001	CONC SURF TREAT (CLASS II) DOLLARS and CENTS	SY	22,435.000	62
	430	2108		CL C CONC FOR EXT STRU (CULV)(2-8'X6') DOLLARS and CENTS	LF	45.000	63
	432	2001		RIPRAP (CONC)(4 IN) DOLLARS and CENTS	CY	2,102.700	64
	432	2002		RIPRAP (CONC)(5 IN) DOLLARS and CENTS	CY	5.000	65

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	ITEM NO	DESC CODE	S.P. NO.				
	432	2015		RIPRAP (STONE COMMON)(DRY)(6 IN) DOLLARS and CENTS	CY	47.000	66
	432	2021		RIPRAP (STONE PROTECTION)(18 IN) DOLLARS and CENTS	CY	5,103.000	67
	432	2023		RIPRAP (STONE PROTECTION)(24 IN) DOLLARS and CENTS	CY	302.000	68
	432	2024		RIPRAP (STONE PROTECTION)(30 IN) DOLLARS and CENTS	CY	112.000	69
	432	2030		RIPRAP (CONC)(CL C) DOLLARS and CENTS	CY	75.230	70
	432	2040		RIPRAP (MOW STRIP)(5 IN) DOLLARS and CENTS	CY	344.000	71
	432	2048		RIPRAP (CONC)(FLUME) DOLLARS and CENTS	CY	246.000	72
	434	2080	003	SLIDING ELASTOMERIC BEAR (ES 8) DOLLARS and CENTS	EA	10.000	73
	434	2123	003	ELASTOMERIC BEAR(E10) DOLLARS and CENTS	EA	5.000	74
	434	2124	003	ELASTOMERIC BEAR(F10) DOLLARS and CENTS	EA	5.000	75
	442	2002	016	STR STL (PLATE GIRDER) DOLLARS and CENTS	LB	2,635,000.00	76

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	442	2047	016	STRUCTURAL STEEL(MISCELLANEOUS BRIDGE)  DOLLARS CENTS and	LB	2,986.000	77
	442	2048	016	STRUCTURAL STEEL(MISC NON-BRIDGE) DOLLARS CENTS and	LB	1,672.000	78
	450	2071	001	RAIL (TY C402) DOLLARS CENTS and	LF	980.000	79
	450	2126	001	RAIL (TY T402) DOLLARS CENTS and	LF	980.000	80
	450	2135	001	RAIL (TY T1F) DOLLARS CENTS and	LF	8,716.500	81
	454	2001		SEALED EXPANSION JOINT (4 IN)(SEJ-A) DOLLARS CENTS and	LF	905.000	82
	454	2009		SEALED EXPANSION JOINT (5 IN)(SEJ-A) DOLLARS CENTS and	LF	78.000	83
	462	2001		CONC BOX CULV (3 FT X 2 FT) DOLLARS CENTS and	LF	232.000	84
	462	2003		CONC BOX CULV (4 FT X 2 FT) DOLLARS CENTS and	LF	381.000	85
	462	2007		CONC BOX CULV (5 FT X 3 FT) DOLLARS CENTS and	LF	962.000	86

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	ITEM NO	DESC CODE	S.P. NO.				
	462	2008		CONC BOX CULV (5 FT X 4 FT) DOLLARS and CENTS	LF	1,390.000	87
	462	2010		CONC BOX CULV (6 FT X 3 FT) DOLLARS and CENTS	LF	424.000	88
	462	2011		CONC BOX CULV (6 FT X 4 FT) DOLLARS and CENTS	LF	756.000	89
	462	2014		CONC BOX CULV (7 FT X 3 FT) DOLLARS and CENTS	LF	100.000	90
	462	2034		CONC BOX CULV (10 FT X 10 FT) DOLLARS and CENTS	LF	720.000	91
	464	2005	003	RC PIPE (CL III)(24 IN) DOLLARS and CENTS	LF	3,078.000	92
	464	2007	003	RC PIPE (CL III)(30 IN) DOLLARS and CENTS	LF	946.000	93
	464	2009	003	RC PIPE (CL III)(36 IN) DOLLARS and CENTS	LF	423.000	94
	465	2003	001	INLET (COMPL)(TY H) DOLLARS and CENTS	EA	5.000	95
	465	2005	001	MANH (COMPL)(TY M) DOLLARS and CENTS	EA	3.000	96
	465	2027	001	INLET (COMPL)(CURB)(TY II)(10') DOLLARS and CENTS	EA	21.000	97

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	465	2028	001	INLET (COMPL)(CURB)(TY II)(15') DOLLARS and CENTS	EA	10.000	98
	465	2385	001	INLET (COMPL)(CURB)(SPL) DOLLARS and CENTS	EA	22.000	99
	465	2497	001	INLET (COMPL)(DROP)(TY XXVI) DOLLARS and CENTS	EA	5.000	100
	466	2057		WINGWALL (PW)(HW=13 FT) DOLLARS and CENTS	EA	2.000	101
	467	2039		SET (TY I)(S= 5 FT)(HW= 4 FT)(3:1)(C) DOLLARS and CENTS	EA	3.000	102
	467	2069		SET (TY I)(S= 8 FT)(HW= 8 FT)(3:1)(C) DOLLARS and CENTS	EA	2.000	103
	467	2114		SET (TY I)(S= 5 FT)(HW= 4 FT)(4:1)(C) DOLLARS and CENTS	EA	2.000	104
	467	2115		SET (TY I)(S= 5 FT)(HW= 5 FT)(4:1)(C) DOLLARS and CENTS	EA	8.000	105
	467	2121		SET (TY I)(S= 6 FT)(HW= 5 FT)(4:1)(C) DOLLARS and CENTS	EA	10.000	106
	467	2126		SET (TY I)(S= 7 FT)(HW= 4 FT)(4:1)(C) DOLLARS and CENTS	EA	4.000	107
	467	2172		SET (TY I)(S= 3 FT)(HW= 3 FT)(6:1)(P) DOLLARS and CENTS	EA	2.000	108

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	467	2177		SET (TY I)(S= 4 FT)(HW= 3 FT)(6:1)(P) DOLLARS and CENTS	EA	6.000	109
	467	2224		SET (TY II)(24 IN)(RCP)(4:1)(C) DOLLARS and CENTS	EA	2.000	110
	467	2227		SET (TY II)(36 IN)(RCP)(4:1)(C) DOLLARS and CENTS	EA	2.000	111
	467	2236		SET (TY II)(24 IN)(RCP)(6:1)(C) DOLLARS and CENTS	EA	3.000	112
	467	2288		SET (TY II)(24 IN)(RCP)(6:1)(P) DOLLARS and CENTS	EA	5.000	113
	467	2356		SET (TY II)(24 IN)(RCP)(3:1)(P) DOLLARS and CENTS	EA	1.000	114
	467	2429		SET (TY I)(S= 3 FT)(HW= 3 FT)(4:1)(P) DOLLARS and CENTS	EA	2.000	115
	467	2518		SET (TY I)(S=4)(H=3)(4:1)(P) DOLLARS and CENTS	EA	2.000	116
	471	2003		GRATE & FRAME DOLLARS and CENTS	EA	11.000	117
	476	2002		JACK BOR OR TUN PIPE(24 IN)(RC)(CL III) DOLLARS and CENTS	LF	105.000	118
	479	2006		ADJUST INLET (CAP) DOLLARS and CENTS	EA	1.000	119

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	481	2012		PVC PIPE (SCH 40)(6 IN)  DOLLARS and CENTS	LF	657.000	120
	500	2001	005	MOBILIZATION  DOLLARS and CENTS	LS	1.000	121
	502	2001	033	BARRICADES, SIGNS AND TRAFFIC HAN- DLING  DOLLARS and CENTS	MO	28.000	122
	506	2001	011	ROCK FILTER DAMS (INSTALL) (TY 1)  DOLLARS and CENTS	LF	420.000	123
	506	2002	011	ROCK FILTER DAMS (INSTALL) (TY 2)  DOLLARS and CENTS	LF	840.000	124
	506	2003	011	ROCK FILTER DAMS (INSTALL) (TY 3)  DOLLARS and CENTS	LF	735.000	125
	506	2009	011	ROCK FILTER DAMS (REMOVE)  DOLLARS and CENTS	LF	1,995.000	126
	506	2016	011	CONSTRUCTION EXITS (INSTALL) (TY 1)  DOLLARS and CENTS	SY	2,496.000	127
	506	2019	011	CONSTRUCTION EXITS (REMOVE)  DOLLARS and CENTS	SY	2,496.000	128
	506	2024	011	BACKHOE WORK (EROSION & SEDM CONT)  DOLLARS and CENTS	HR	50.000	129



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	ITEM NO	DESC CODE	S.P. NO.				
	506	2034	011	TEMPORARY SEDIMENT CONTROL FENCE DOLLARS and CENTS	LF	55,544.000	130
	506	2048	011	(EROS & SEDM CONT) DIKE WITH SWALE DOLLARS and CENTS	LF	3,200.000	131
	508	2002		CONSTRUCTING DETOURS DOLLARS and CENTS	SY	21,329.000	132
	512	2014	002	PORT CTB (DES SOURCE)(SNGL SLP)(TY 2) DOLLARS and CENTS	LF	6,090.000	133
	512	2017	002	PORT CTB (DES SOURCE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	3,860.000	134
	512	2018	002	PORT CTB (DES SOURCE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	280.000	135
	512	2023	002	PORT CTB (MOVE)(SNGL SLP) (TY 2) DOLLARS and CENTS	LF	2,760.000	136
	512	2026	002	PORT CTB (MOVE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	3,220.000	137
	512	2027	002	PORT CTB (MOVE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	240.000	138
	512	2041	002	PORT CTB (REMOVE)(SNGL SLP) (TY 2) DOLLARS and CENTS	LF	6,090.000	139
	512	2044	002	PORT CTB (REMOVE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	3,860.000	140

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	512	2045	002	PORT CTB (REMOVE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	280.000	141
	528	2001		COLORED TEXTURED CONC (4") DOLLARS and CENTS	SY	714.000	142
	528	2004		LANDSCAPE PAVERS DOLLARS and CENTS	SY	528.000	143
	529	2003		CONC CURB & GUTTER (TY I) DOLLARS and CENTS	LF	3,863.000	144
	529	2004		CONC CURB & GUTTER (TY II) DOLLARS and CENTS	LF	14,048.000	145
	529	2006		CONC CURB (MONO) (TY II) DOLLARS and CENTS	LF	4,035.000	146
	530	2023		DRIVEWAYS AND TURNOUTS (ACP) DOLLARS and CENTS	SY	3,611.000	147
	531	2005		CURB RAMPS (TY 1) DOLLARS and CENTS	EA	7.000	148
	531	2006		CURB RAMPS (TY 2) DOLLARS and CENTS	EA	1.000	149
	531	2011		CURB RAMPS (TY 8) DOLLARS and CENTS	EA	1.000	150
	531	2015		CONC SIDEWALKS (4") DOLLARS and CENTS	SY	736.000	151

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	531	2020		CURB RAMPS (TY 2)(MOD) DOLLARS and CENTS	EA	12.000	152
	531	2044		CURB RAMPS (TY 10) DOLLARS and CENTS	EA	25.000	153
	540	2002	023	MTL W-BEAM GD FEN (STEEL POST) DOLLARS and CENTS	LF	2,750.000	154
	540	2005	023	TERMINAL ANCHOR SECTION DOLLARS and CENTS	EA	8.000	155
	540	2011	023	MTL BEAM GD FEN TRANS (THRIE-BEAM) DOLLARS and CENTS	EA	22.000	156
	540	2012	023	MTL BEAM GD FEN TRANS (TL2) DOLLARS and CENTS	EA	4.000	157
	542	2001		REMOVING METAL BEAM GUARD FENCE DOLLARS and CENTS	LF	925.000	158
	544	2001	001	GUARDRAIL END TREATMENT (INSTALL) DOLLARS and CENTS	EA	20.000	159
	544	2003	001	GUARDRAIL END TREATMENT (REMOVE) DOLLARS and CENTS	EA	8.000	160
	545	2049		CRASH CUSH ATTEN (INSTL)(WORK ZONE) DOLLARS and CENTS	EA	5.000	161

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	545	2050		CRASH CUSH ATTEN(MOV&RESET)(WORK ZONE)  DOLLARS CENTS and	EA	2.000	162
	545	2051		CRASH CUSH ATTEN (REMOVE)(WORK ZONE)  DOLLARS CENTS and	EA	5.000	163
	550	2003		CHAIN LINK FENCE (REMOVE)  DOLLARS CENTS and	LF	5,900.000	164
	550	2006		GATE (REMOVE)  DOLLARS CENTS and	EA	1.000	165
	550	2020		CHAIN LINK FENCE (INSTALL) (8')  DOLLARS CENTS and	LF	5,900.000	166
	550	2047		GATE (INSTALL)(DOUBLE)(8'X24')  DOLLARS CENTS and	EA	1.000	167
	552	2003		WIRE FENCE (TY C)  DOLLARS CENTS and	LF	9,044.000	168
	552	2005		GATE (TY 1)  DOLLARS CENTS and	EA	2.000	169
	556	2008		PIPE UNDERDRAINS (TY 8) (6")  DOLLARS CENTS and	LF	2,000.000	170
	556	2009		PIPE UNDERDRAINS (TY 9) (6")  DOLLARS CENTS and	LF	3,354.000	171

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	560	2004	001	MAILBOX INSTALL-S (WC-POST) TY 3 FND DOLLARS and CENTS	EA	3.000	172
	610	2025	010	INS RD IL AM (TY SA) 40T-8 (.25 KW)S DOLLARS and CENTS	EA	42.000	173
	610	2059	010	INS RD IL AM (U/P) (TY IF) (.15KW) DOLLARS and CENTS	EA	4.000	174
	610	2060	010	INS RD IL AM (U/P) (TY 1) (.15KW)S DOLLARS and CENTS	EA	6.000	175
	618	2018		CONDT (PVC) (SCHD 40) ( 2") DOLLARS and CENTS	LF	12,375.000	176
	618	2052		CONDT (RM) (2") DOLLARS and CENTS	LF	445.000	177
	620	2009	001	ELEC CONDR (NO. 6) BARE DOLLARS and CENTS	LF	20.000	178
	620	2011	001	ELEC CONDR (NO. 8) BARE DOLLARS and CENTS	LF	12,937.000	179
	620	2012	001	ELEC CONDR (NO. 8) INSULATED DOLLARS and CENTS	LF	25,874.000	180
	620	2013	001	ELEC CONDR (NO.10) BARE DOLLARS and CENTS	LF	513.000	181
	620	2014	001	ELEC CONDR (NO.10) INSULATED DOLLARS and CENTS	LF	1,026.000	182

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	624	2008	014	GROUND BOX TY A (122311) W/APRON DOLLARS and CENTS	EA	55.000	183
	628	2018	001	ELC SRV TY A 240/480 060 (NS)SS(E)SP(U) DOLLARS and CENTS	EA	8.000	184
	636	2001	014	ALUMINUM SIGNS (TY A) DOLLARS and CENTS	SF	224.000	185
	636	2002	014	ALUMINUM SIGNS (TY G) DOLLARS and CENTS	SF	880.750	186
	636	2003	014	ALUMINUM SIGNS (TY O) DOLLARS and CENTS	SF	1,755.050	187
	644	2001		INS SM RD SN SUP&AM TY 10BWG(1) SA(P) DOLLARS and CENTS	EA	4.000	188
	644	2004		INS SM RD SN SUP&AM TY 10BWG(1) SA(T) DOLLARS and CENTS	EA	28.000	189
	644	2006		INS SM RD SN SUP&AM TY 10BWG(1) SA(U) DOLLARS and CENTS	EA	2.000	190
	644	2025		INS SM RD SN SUP&AM TY S80(1) SA(T) DOLLARS and CENTS	EA	7.000	191
	644	2027		INS SM RD SN SUP&AM TY S80(1) SA(U) DOLLARS and CENTS	EA	9.000	192
	644	2028		INS SM RD SN SUP&AM TY S80(1)SA(U-1EXT) DOLLARS and CENTS	EA	2.000	193

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	644	2053		INS SM RD SN SUP&AM TY TWT(1) WA(P) DOLLARS and CENTS	EA	91.000	194
	644	2054		INS SM RD SN SUP&AM TY TWT(1) WA(T) DOLLARS and CENTS	EA	12.000	195
	647	2001		INSTALL LRSS (STRUCT STEEL) DOLLARS and CENTS	LB	3,501.600	196
	650	2118		INS OH SN SUP(115 FT BRDG) DOLLARS and CENTS	EA	2.000	197
	658	2258		INSTL DEL ASSM (D-SW)SZ (TYC)CTB DOLLARS and CENTS	EA	29.000	198
	658	2259		INSTL DEL ASSM (D-SW)SZ (TYC)CTB(BI) DOLLARS and CENTS	EA	66.000	199
	658	2277		INSTL DEL ASSM (D-SY)SZ (TYC)CTB DOLLARS and CENTS	EA	5.000	200
	658	2278		INSTL DEL ASSM (D-SY)SZ (TYC)CTB(BI) DOLLARS and CENTS	EA	10.000	201
	658	2292		INSTL DEL ASSM (D-DW)SZ 1(FLX)GND DOLLARS and CENTS	EA	48.000	202
	658	2316		INSTL OM ASSM (OM-2Z)(FLX)GND DOLLARS and CENTS	EA	15.000	203
	658	2329		INSTL DEL ASSM (D-SW)SZ 1(FLX)GND DOLLARS and CENTS	EA	99.000	204

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	662	2001		WK ZN PAV MRK NON-REMOV (W) 4" (BRK) DOLLARS and CENTS	LF	720.000	205
	662	2002		WK ZN PAV MRK NON-REMOV (W) 4" (DOT) DOLLARS and CENTS	LF	66.000	206
	662	2004		WK ZN PAV MRK NON-REMOV (W) 4" (SLD) DOLLARS and CENTS	LF	42,298.000	207
	662	2012		WK ZN PAV MRK NON-REMOV (W) 8" (SLD) DOLLARS and CENTS	LF	977.000	208
	662	2016		WK ZN PAV MRK NON-REMOV (W) 24" (SLD) DOLLARS and CENTS	LF	124.000	209
	662	2017		WK ZN PAV MRK NON-REMOV (W) (ARROW) DOLLARS and CENTS	EA	11.000	210
	662	2027		WK ZN PAV MRK NON-REMOV (W) (WORD) DOLLARS and CENTS	EA	11.000	211
	662	2032		WK ZN PAV MRK NON-REMOV (Y) 4" (SLD) DOLLARS and CENTS	LF	54,186.000	212
	662	2037		WK ZN PAV MRK NON-REMOV (Y) 12" (SLD) DOLLARS and CENTS	LF	412.000	213
	662	2067		WK ZN PAV MRK REMOV (W) 4" (SLD) DOLLARS and CENTS	LF	2,402.000	214
	662	2099		WK ZN PAV MRK REMOV (Y) 4" (SLD) DOLLARS and CENTS	LF	2,500.000	215



ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	666	2047		REFL PAV MRK TY I (W) 24"(SLD)(090MIL) DOLLARS and CENTS	LF	3,750.000	216
	666	2131		REFL PAV MRK TY I (Y) 24"(SLD)(090MIL) DOLLARS and CENTS	LF	4,151.000	217
	666	2195		PAVEMENT SEALER 24" DOLLARS and CENTS	LF	7,901.000	218
	666	2219		PAVEMENT SEALER (ARROW) DOLLARS and CENTS	EA	47.000	219
	666	2220		PAVEMENT SEALER (WORD) DOLLARS and CENTS	EA	27.000	220
	666	2257		PAVEMENT SEALER (YLD TRI) DOLLARS and CENTS	EA	36.000	221
	668	2106		PREFAB PAV MRK TY C (W) (ARROW) DOLLARS and CENTS	EA	50.000	222
	668	2116		PREFAB PAV MRK TY C (W) (WORD) DOLLARS and CENTS	EA	26.000	223
	668	2118		PREFAB PAV MRK TY C (W) (36")(YLD TRI) DOLLARS and CENTS	EA	24.000	224
	672	2014	034	REFL PAV MRKR TY I-R DOLLARS and CENTS	EA	60.000	225
	672	2015	034	REFL PAV MRKR TY II-A-A DOLLARS and CENTS	EA	1,114.000	226

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	672	2017	034	REFL PAV MRKR TY II-C-R DOLLARS and CENTS	EA	1,017.000	227
	672	2024	034	TRAFFIC BUTTON TY W DOLLARS and CENTS	EA	96.000	228
	677	2001		ELIM EXT PAV MRK & MRKS ( 4") DOLLARS and CENTS	LF	62,180.000	229
	677	2003		ELIM EXT PAV MRK & MRKS ( 8") DOLLARS and CENTS	LF	1,560.000	230
	677	2007		ELIM EXT PAV MRK & MRKS (24") DOLLARS and CENTS	LF	124.000	231
	677	2008		ELIM EXT PAV MRK & MRKS (ARROW) DOLLARS and CENTS	EA	11.000	232
	677	2018		ELIM EXT PAV MRK & MRKS (WORD) DOLLARS and CENTS	EA	11.000	233
	678	2021		PAV SURF PREP FOR MRK (BLAST CLN)(4") DOLLARS and CENTS	LF	31,266.000	234
	678	2023		PAV SURF PREP FOR MRK (BLAST CLN)(12") DOLLARS and CENTS	LF	2,554.000	235
	678	2024		PAV SURF PREP FOR MRK (BLAST CLN)(24") DOLLARS and CENTS	LF	7,861.000	236
	678	2027		PAV SURF PREP FOR MRK (BLAST CLN)(8") DOLLARS and CENTS	LF	9,431.000	237

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	678	2028		PAV SURF PREP FOR MRK (BLST CLN)(ARRWS)  DOLLARS CENTS and	EA	50.000	238
	678	2029		PAV SURF PREP FOR MRK (BLST CLN)(WORDS)  DOLLARS CENTS and	EA	30.000	239
	678	2034		PV SRF PREP FOR MRK(BLT CLN)36" YLD TRI DOLLARS CENTS and	EA	24.000	240
	682	2025	001	VEH SIG SEC (12 IN) LED (YEL)  DOLLARS CENTS and	EA	4.000	241
	682	2028	001	BACK PLATE (12 IN) (1 SEC)  DOLLARS CENTS and	EA	4.000	242
	685	2004	014	INSTL RDSD FLSH BEACON ASSM(SOLAR PWRD)  DOLLARS CENTS and	EA	2.000	243
	730	2003	003	SPOT MOWING  DOLLARS CENTS and	AC	12.000	244
	738	2001		CLEANING/SWEEPING (CENTER MEDIAN) DOLLARS CENTS and	CYC	24.000	245
	740	2005	001	ANTI-GRAFFITI COATING (PERMANENT) DOLLARS CENTS and	SF	141,598.000	246
	751	2025		LITTER PICKUP  DOLLARS CENTS and	CYC	12.000	247

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	3224	2008		D-GR HMA(QCQA) TY-B PG64-22 DOLLARS and CENTS	TON	42,561.000	248
	3224	2027		D-GR HMA(QCQA) TY-C SAC-B PG70-22 DOLLARS and CENTS	TON	22,672.000	249
	4118	2001		ROCK NAIL ANCHORS DOLLARS and CENTS	LF	45,675.000	250
	5049	2002		BIODGRD EROSION CONTROL LOGS (18" DIA) DOLLARS and CENTS	LF	532.000	251
	5369	2001		CENTERLINE TEXTURING DOLLARS and CENTS	STA	205.500	252
	5777	2001		F&I 12"CLASS 200 WATERLINE DOLLARS and CENTS	LF	1,868.000	253
	5777	2002		F&I 8" WATERLINE DOLLARS and CENTS	LF	3,364.000	254
	5777	2003		F&I 8" WATER VALVE DOLLARS and CENTS	EA	4.000	255
	5777	2004		F&I 8"X12" REDUCER DOLLARS and CENTS	EA	1.000	256
	5777	2005		F&I 8" TEE DOLLARS and CENTS	EA	1.000	257

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	5777	2006		F&I 6" WATER VALVE DOLLARS and CENTS	EA	1.000	258
	5777	2007		F&I 6"X8" TEE DOLLARS and CENTS	EA	1.000	259
	5777	2008		F&I 8"(11.25 DEG)BEND DOLLARS and CENTS	EA	1.000	260
	5777	2009		F&I 12"(11.25 DEG)BEND DOLLARS and CENTS	EA	1.000	261
	5777	2010		F&I 8"(22.5 DEG)BEND DOLLARS and CENTS	EA	1.000	262
	5777	2011		F&I 12"(22.5 DEG)BEND DOLLARS and CENTS	EA	1.000	263
	5777	2012		F&I 45 DEG BEND DOLLARS and CENTS	EA	2.000	264
	5777	2013		F&I 8"(90 DEG)BEND DOLLARS and CENTS	EA	2.000	265
	5777	2014		F&I 12"(90 DEG)BEND DOLLARS and CENTS	EA	3.000	266
	5777	2015		F&I WET CONNECTION DOLLARS and CENTS	EA	5.000	267
	5777	2016		F&I FLUSH VALVE DOLLARS and CENTS	EA	3.000	268

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	5777	2017		F&I STREAM CROSSING DOLLARS and CENTS	LF	195.000	269
	5777	2018		F&I BORE & ENCASE 12" CARRIER PIPE DOLLARS and CENTS	LF	97.000	270
	5777	2019		F&I BORE & ENCASE 8" CARRIER PIPE DOLLARS and CENTS	LF	204.000	271
	5777	2020		REMOVE EXIST WATERLINE DOLLARS and CENTS	LF	5,380.000	272
	5777	2021		REMOVE & RELOC EXIST WATER METER DOLLARS and CENTS	EA	6.000	273
	5777	2022		REMOVE & RELOC EXIST WATER VALVE DOLLARS and CENTS	EA	1.000	274
	5777	2023		REMOVE & RELOC EXIST FIRE HYDRANT DOLLARS and CENTS	EA	3.000	275
	5779	2001		F&I 8"WASTEWATER LINE(0'-8')DEPTH DOLLARS and CENTS	LF	1,472.000	276
	5779	2002		F&I 8"WASTEWATER LINE(8'-10')DEPTH DOLLARS and CENTS	LF	480.000	277
	5779	2003		F&I 8"WASTEWATER LINE(10'-12')DEPTH DOLLARS and CENTS	LF	135.000	278
	5779	2004		F&I 12"WASTEWATER LINE(0'-8')DEPTH DOLLARS and CENTS	LF	231.000	279

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	5779	2005		F&I WASTEWATER MANHOLE(0'-8')DEPTH DOLLARS and CENTS	EA	12.000	280
	5779	2006		F&I WASTEWATER MANHOLE(8'-10')DEPTH DOLLARS and CENTS	EA	3.000	281
	5779	2007		F&I WASTEWATER MANHOLE(12'-14')DEPTH DOLLARS and CENTS	EA	1.000	282
	5779	2008		F&I BORE & ENCASE 8"CARRIER PIPE DOLLARS and CENTS	LF	652.000	283
	5779	2009		F&I STEEL ENCASEMENT DOLLARS and CENTS	LF	60.000	284
	5779	2010		F&I CONCRETE CAP DOLLARS and CENTS	LF	150.000	285
	5779	2011		ADJUST MANHOLE DOLLARS and CENTS	EA	13.000	286
	5779	2012		CONCRETE RETARDS DOLLARS and CENTS	EA	3.000	287
	5779	2013		REMOVE EXIST WASTEWATER LINE DOLLARS and CENTS	LF	2,980.000	288
	5779	2014		REMOVE EXIST MANHOLE DOLLARS and CENTS	EA	1.000	289
	5779	2015		F&I WASTEWATER MANHOLE (LEACHATE) DOLLARS and CENTS	EA	12.000	290

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	5779	2016		F&I WASTERWATER LINE (8")(LEACHATE) DOLLARS and CENTS	LF	998.000	291
	6473	2001	001	MULTIPOLYMER PAV MRK (W)(4")(SLD) DOLLARS and CENTS	LF	74,295.000	292
	6473	2002	001	MULTIPOLYMER PAV MRK (W)(4")(BRK) DOLLARS and CENTS	LF	3,784.000	293
	6473	2007	001	MULTIPOLYMER PAV MRK (W)(8")(SLD) DOLLARS and CENTS	LF	13,977.000	294
	6473	2009	001	MULTIPOLYMER PAV MRK (W)(12")(SLD) DOLLARS and CENTS	LF	1,499.000	295
	6473	2010	001	MULTIPOLYMER PAV MRK (W)(12")(LNDP) DOLLARS and CENTS	LF	30.000	296
	6473	2011	001	MULTIPOLYMER PAV MRK (Y)(4")(SLD) DOLLARS and CENTS	LF	83,694.000	297
	6473	2012	001	MULTIPOLYMER PAV MRK (Y)(4")(BRK) DOLLARS and CENTS	LF	697.000	298
	6834	2001		PORTABLE CHANGEABLE MESSAGE SIGN DOLLARS and CENTS	DAY	1,000.000	299
	8403	2001		REMOV (4~1.9") HDPE DUCT BANK DOLLARS and CENTS	LF	13,459.000	300
	8403	2002		REMOV (2.5'X5'X2.5')FIBGLASS HANDHOLE DOLLARS and CENTS	EA	4.000	301



ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
				OPTION 1  DOLLARS and CENTS			
	100	2018	002	PREPARING ROW(OPT1)  DOLLARS and CENTS	STA	81.500	302
	110	2007		EXCAVATION(ROADWAY)(OPT1)  DOLLARS and CENTS	CY	107,898.000	303
	132	2042		EMBANKMENT(FINAL)(DC)(TYB)(OPT1)  DOLLARS and CENTS	CY	85,477.000	304
	160	2011		FURNISHING AND PLACE TOPSOIL(4")(OPT1)  DOLLARS and CENTS	SY	126,950.000	305
	162	2006		BLOCK SODDING(OPT1)  DOLLARS and CENTS	SY	169.000	306
	164	2060	004	DRILL SEED- ING(PERM)(RURAL)(CLAY)(OPT1)  DOLLARS and CENTS	SY	126,950.000	307
	164	2061	004	DRILL SEEDING(TEMP)(WARM)(OPT1)  DOLLARS and CENTS	SY	63,478.000	308
	164	2062	004	DRILL SEEDING(TEMP)(COOL)(OPT1)  DOLLARS and CENTS	SY	63,478.000	309
	168	2002		VEGETATIVE WATERING(OPT1)  DOLLARS and CENTS	MG	4,134.300	310

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	169	2009	002	SOIL RETENTION BLANKETS(CL1)(TYA)(OPT1)  DOLLARS CENTS and	SY	873.000	311
	169	2010	002	SOIL RETENTION BLANKETS(CL2)(TYG)(OPT1)  DOLLARS CENTS and	SY	2,282.000	312
	192	2095		PLANT MATERIAL(15GAL)(TREE)(OPT1)  DOLLARS CENTS and	EA	41.000	313
	193	2037		PLANT MAINTENANCE(OPT1)  DOLLARS CENTS and	MO	9.000	314
	193	2038		VEGETATIVE WATERING(OPT1)  DOLLARS CENTS and	MG	28.000	315
	247	2408	040	FL BS(CMP IN PLC,TYD GR4)(FNL PS)(OPT1)  DOLLARS CENTS and	CY	20,578.000	316
	251	2313		REWRK BS MTL(TYC)(6")(OC)STKPL)(OPT1)  DOLLARS CENTS and	CY	1,284.000	317
	251	2314		REWRK BS MTL(TYC)(14")(STKPL)(OPT1)  DOLLARS CENTS and	SY	38,882.000	318
	276	2281		CM TRT(PT MX,CLN,TYD,GR4)(FN POS)(OPT1)  DOLLARS CENTS and	CY	3,333.000	319
	305	2057		SALV,HAUL&STKPL RCL ASPH PV(0-2")(OPT1)  DOLLARS CENTS and	SY	50,549.000	320

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	310	2028		PRIME COAT(MC-30 OR AE-P)(OPT1) DOLLARS and CENTS	GAL	22,075.000	321
	316	2723	016	ASPH(HFRS-2 OR CRS-2)(OPT1) DOLLARS and CENTS	GAL	34,974.000	322
	316	2724	016	AGGR(TYPD GR4 OR TYPL GR4)(SAC-B)(OPT1) DOLLARS and CENTS	CY	232.000	323
	316	2725	016	AGGR(TY-D GR4 OR TY-L GR4)(SAC-C)(OPT1) DOLLARS and CENTS	CY	667.000	324
	316	2726	016	ASPH(AC-15P,20-XP,10-2TR,12-5TR)(OPT1) DOLLARS and CENTS	GAL	10,158.000	325
	360	2077	003	CONC PVMT(CONT REINF-CRCP)(9")(OPT1) DOLLARS and CENTS	SY	22,892.000	326
	400	2021		CEM STABIL BKFL(OPT1) DOLLARS and CENTS	CY	428.000	327
	402	2004		TRENCH EXCAVATION PROTECTION(OPT1) DOLLARS and CENTS	LF	1,132.000	328
	403	2008		TEMPORARY SPL SHORING(OPT1) DOLLARS and CENTS	SF	1,924.000	329
	416	2069	001	DRILL SHAFT(RDWY ILL POLE)(30IN)(OPT1) DOLLARS and CENTS	LF	90.000	330

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	416	2070	001	DRILL SHAFT(TRF SIG POLE)(36IN)(OPT1) DOLLARS and CENTS	LF	52.000	331
	416	2074	001	DRILL SHAFT (SIGN MTS) (24 IN)(OPT1) DOLLARS and CENTS	LF	92.000	332
	420	2271	002	CL C CONC(RAIL FOUNDATION)(OPT1) DOLLARS and CENTS	CY	61.000	333
	432	2104		RIPRAP(CONC)(4IN)(OPT1) DOLLARS and CENTS	CY	110.300	334
	432	2105		RIPRAP(STONE COMMON)(DRY)(6IN)(OPT1) DOLLARS and CENTS	CY	21.000	335
	432	2106		RIPRAP(STONE PROTECTION)(24IN)(OPT1) DOLLARS and CENTS	CY	22.000	336
	432	2107		RIPRAP(STONE PROTECTION)(30IN)(OPT1) DOLLARS and CENTS	CY	42.000	337
	432	2108		RIPRAP(CONC)(CL C)(OPT1) DOLLARS and CENTS	CY	21.860	338
	432	2109		RIPRAP(MOW STRIP)(5IN)(OPT1) DOLLARS and CENTS	CY	5.000	339
	450	2617	001	RAIL(TY SSTR)(OPT1) DOLLARS and CENTS	LF	600.000	340
	450	2618	001	RAIL(TY PR1)(OPT1) DOLLARS and CENTS	LF	100.000	341

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	462	2105		CONC BOX CULV(4FT X 2FT)(OPT1) DOLLARS and CENTS	LF	298.000	342
	462	2106		CONC BOX CULV(5FT X 3FT)(OPT1) DOLLARS and CENTS	LF	1,221.000	343
	462	2107		CONC BOX CULV(6FT X 3FT)(OPT1) DOLLARS and CENTS	LF	230.000	344
	464	2142	003	RC PIPE(CL III)(24IN)(OPT1) DOLLARS and CENTS	LF	3,150.000	345
	464	2143	003	RC PIPE(CL III)(30IN)(OPT1) DOLLARS and CENTS	LF	345.000	346
	464	2144	003	RC PIPE(CL III)(36IN)(OPT1) DOLLARS and CENTS	LF	798.000	347
	464	2145	003	RC PIPE(CL III)(42IN)(OPT1) DOLLARS and CENTS	LF	209.000	348
	465	2711	001	INLET(COMPL)(TY H)(OPT1) DOLLARS and CENTS	EA	4.000	349
	465	2712	001	MANH(COMPL)(TY M)(OPT1) DOLLARS and CENTS	EA	1.000	350
	465	2713	001	INLET(COMPL)(CURB)(TY IIR)(10FT)(OPT1) DOLLARS and CENTS	EA	4.000	351
	465	2714	001	INLET(COMPL)(CURB)(TY II)(10FT)(OPT1) DOLLARS and CENTS	EA	4.000	352

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	465	2715	001	INLET(COMPL)(CURB)(TY II)(15FT)(OPT1) DOLLARS and CENTS	EA	7.000	353
	465	2716	001	INLET(COMPL)(CURB)(TY IIR)(15FT)(OPT1) DOLLARS and CENTS	EA	6.000	354
	465	2717	001	INLET(COMPL)(3)(OB)-02 FW(10FT)(OPT1) DOLLARS and CENTS	EA	17.000	355
	466	2314		WINGWALL(PW)(HW=8FT)(OPT1) DOLLARS and CENTS	EA	1.000	356
	466	2315		HEADWALL(CH-FW-0)(DIA=42IN)(OPT1) DOLLARS and CENTS	EA	1.000	357
	466	2316		HEADWALL(CH-PW-0)(DIA=42IN)(OPT1) DOLLARS and CENTS	EA	1.000	358
	467	2648		SET(TY I)(S=4FT)(HW=5FT)(4:1)(C)(OPT1) DOLLARS and CENTS	EA	2.000	359
	467	2649		SET(TY I)(S=5FT)(HW=4FT)(4:1)(C)(OPT1) DOLLARS and CENTS	EA	3.000	360
	467	2650		SET(TY I)(S=5FT)(HW=5FT)(4:1)(C)(OPT1) DOLLARS and CENTS	EA	3.000	361
	467	2651		SET(TY I)(S=6FT)(HW=4FT)(4:1)(C)(OPT1) DOLLARS and CENTS	EA	1.000	362
	467	2652		SET(TY II)(24IN)(RCP)(4:1)(C)(OPT1) DOLLARS and CENTS	EA	1.000	363

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	467	2654		SET(TY II)(24IN)(RCP)(6:1)(C)(OPT1) DOLLARS and CENTS	EA	7.000	364
	467	2655		SET(TY II)(30IN)(RCP)(6:1)(P)(OPT1) DOLLARS and CENTS	EA	2.000	365
	467	2656		SET(TY II)(36IN)(RCP)(6:1)(P)(OPT1) DOLLARS and CENTS	EA	6.000	366
	506	2058	011	ROCK FILTER DAMS(INSTALL)(TY 1)(OPT1) DOLLARS and CENTS	LF	399.000	367
	506	2059	011	ROCK FILTER DAMS(INSTALL)(TY 2)(OPT1) DOLLARS and CENTS	LF	84.000	368
	506	2060	011	ROCK FILTER DAMS(INSTALL)(TY 3)(OPT1) DOLLARS and CENTS	LF	73.000	369
	506	2061	011	ROCK FILTER DAMS(REMOVE)(OPT1) DOLLARS and CENTS	LF	556.000	370
	506	2062	011	CONSTRUCTION EXITS(INSTALL)(TY1)(OPT1) DOLLARS and CENTS	SY	1,092.000	371
	506	2063	011	CONSTRUCTION EXITS(REMOVE)(OPT1) DOLLARS and CENTS	SY	1,092.000	372
	506	2064	011	TEMPORARY SEDIMENT CONTROL FENCE(OPT1) DOLLARS and CENTS	LF	14,389.000	373

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	508	2009		CONSTRUCTION DETOURS (OPT1) DOLLARS and CENTS	SY	7,669.000	374
	512	2099	002	PORT CTB(DES SRCE)(SNGL SLP)(TY2)(OPT1) DOLLARS and CENTS	LF	6,270.000	375
	512	2100	002	PORT CTB(MOVE)(SNGL SLP)(TY2)(OPT1) DOLLARS and CENTS	LF	4,800.000	376
	512	2101	002	PORT CTB(REMOVE)(SNGL SLP)(TY2)(OPT1) DOLLARS and CENTS	LF	6,270.000	377
	528	2025		COLORED TEXTURED CONC(4IN)(OPT1) DOLLARS and CENTS	SY	723.000	378
	528	2026		LANDSCAPE PAVERS(OPT1) DOLLARS and CENTS	SY	921.000	379
	529	2087		CONC CURB & GUTTER(TY II)(OPT1) DOLLARS and CENTS	LF	7,224.000	380
	529	2088		CONC CURB (MONO)(TY II)(OPT1) DOLLARS and CENTS	LF	1,694.000	381
	530	2052		DRIVEWAYS AND TURNOUTS(CONC)(OPT1) DOLLARS and CENTS	SY	106.000	382
	530	2053		DRIVEWAYS AND TURNOUTS(ACP)(OPT1) DOLLARS and CENTS	SY	2,948.000	383
	531	2086		CONC SIDEWALK(4IN)(OPT1) DOLLARS and CENTS	SY	711.000	384



ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	531	2087		CURB RAMPS(TY 10)(OPT1)  DOLLARS and CENTS	EA	21.000	385
	540	2039	023	MTL BEAM GD FEN TRANS(THRIE- BEAM)(OPT1)  DOLLARS and CENTS	EA	1.000	386
	542	2006		REMOVING METAL BEAM GUARD FENCE(OPT1)  DOLLARS and CENTS	LF	189.000	387
	544	2017	001	GUARDRAIL END TREAT- MENT(INSTALL)(OPT1)  DOLLARS and CENTS	EA	1.000	388
	544	2018	001	GUARDRAIL END TREAT- MENT(REMOVE)(OPT1)  DOLLARS and CENTS	EA	2.000	389
	545	2074		CRASH CUSH ATTEN(INSTL)(WRK ZONE)(OPT1)  DOLLARS and CENTS	EA	13.000	390
	545	2075		CRASH CUSH ATTN(MOV&RSET)(WRK ZN)(OPT1)  DOLLARS and CENTS	EA	10.000	391
	545	2076		CRASH CUSH ATTEN(REMOV)(WRK ZONE)(OPT1)  DOLLARS and CENTS	EA	13.000	392

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	560	2035	001	MAILBX INSTALL-S(WC-POST)TY 3 FND(OPT1)  DOLLARS CENTS and	EA	3.000	393
	560	2036	001	MAILBX INSTL-M(TWW-PST)TY2 FND- TB(OPT1)  DOLLARS CENTS and	EA	5.000	394
	610	2105	010	INS RD IL AM(TY SA)40T-8(0.25KW)S(OPT1)  DOLLARS CENTS and	EA	10.000	395
	610	2106	010	REMOVE RD IL ASM(SHOE-BASE)(OPT1)  DOLLARS CENTS and	EA	1.000	396
	618	2095		CONDT(PVC)(SCHD 40)(2")(OPT1)  DOLLARS CENTS and	LF	2,140.000	397
	618	2096		CONDT(PVC)(SCHD 40)(3")(OPT1)  DOLLARS CENTS and	LF	420.000	398
	620	2035	001	ELEC CONDR(NO.6)BARE(OPT1)  DOLLARS CENTS and	LF	130.000	399
	620	2036	001	ELEC CONDR(NO.6)INSULATED(OPT1)  DOLLARS CENTS and	LF	260.000	400
	620	2037	001	ELEC CONDR(NO.8)BARE(OPT1)  DOLLARS CENTS and	LF	2,418.000	401
	620	2038	001	ELEC CONDR(NO.8)INSULATED(OPT1)  DOLLARS CENTS and	LF	4,836.000	402

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	621	2007		TRAY CABLE(4 CONDR)(8 AWG)(OPT1) DOLLARS and CENTS	LF	502.000	403
	624	2040	014	GROUND BOX TY A(122311)W/APRON(OPT1) DOLLARS and CENTS	EA	9.000	404
	624	2042	014	GROUND BOX TY D(162922)W/APRON(OPT1) DOLLARS and CENTS	EA	2.000	405
	625	2005	001	ZINC-COAT STL WIRE STRAND(3/8")(OPT1) DOLLARS and CENTS	LF	1,312.000	406
	628	2356	001	ELCSRV TYA240/480 060(NS)SS(E)SP(U)OPT1 DOLLARS and CENTS	EA	2.000	407
	628	2358	001	ELC SV TYD 120/240 060(NS)SS(E)PS(U)OP1 DOLLARS and CENTS	EA	1.000	408
	636	2021	014	ALUMINUM SIGNS(TY G)(OPT1) DOLLARS and CENTS	SF	874.500	409
	636	2024	014	ALUMINUM SIGNS(TY O)(OPT1) DOLLARS and CENTS	SF	33.000	410
	644	2091		INS SM RD SN SUP&AM TY10BWG(1)SA(P)OPT1 DOLLARS and CENTS	EA	5.000	411
	644	2092		INS SM RD SN SUP&AM TY10BWG(1)SA(T)OPT1 DOLLARS and CENTS	EA	3.000	412

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	644	2093		INS SM RD SN SUP&AM TYS80(1)SA(T)(OPT1) DOLLARS and CENTS	EA	2.000	413
	644	2094		INS SM RD SN SUP&AM TYS80(1)SA(U)(OPT1) DOLLARS and CENTS	EA	3.000	414
	644	2095		INS SM RD SN SP&AM TYS80(1)SA(U- 1EXTOP1 DOLLARS and CENTS	EA	1.000	415
	644	2096		INS SM RD SN SP&AM TY TWT(1)WA(P)(OPT1) DOLLARS and CENTS	EA	6.000	416
	644	2097		INS SM RD SN SP&AM TY TWT(1)WA(T)(OPT1) DOLLARS and CENTS	EA	1.000	417
	647	2009		INSTALL LRSS(STRUCT STEEL)(OPT1) DOLLARS and CENTS	LB	4,383.800	418
	658	2386		INSTL OM ASSM(OM-2Z)(FLX)GND(OPT1) DOLLARS and CENTS	EA	3.000	419
	658	2387		INSTL DEL ASSM(D-DW)SZ 1(FLX)GND(OPT1) DOLLARS and CENTS	EA	3.000	420
	658	2388		INSTL DEL ASSM(D-SW)SZ 1(FLX)GND(OPT1) DOLLARS and CENTS	EA	2.000	421

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	662	2122		WK ZN PAV MRK NON- REMOV(W)4"(SLD)(OPT1)  DOLLARS CENTS and	LF	43,687.000	422
	662	2123		WK ZN PAV MRK NON- REMOV(W)8"(SLD)(OPT1)  DOLLARS CENTS and	LF	1,457.000	423
	662	2124		WK ZN PAV MRK NON- REMOV(W)24"(SLD)(OPT1)  DOLLARS CENTS and	LF	276.000	424
	662	2125		WK ZN PAV MRK NON- REMOV(W)(ARROW)(OPT1)  DOLLARS CENTS and	EA	14.000	425
	662	2126		WK ZN PAV MRK NON- REMOV(W)(WORD)(OPT1)  DOLLARS CENTS and	EA	12.000	426
	662	2127		WK ZN PAV MRK NON- REMOV(Y)4"(SLD)(OPT1)  DOLLARS CENTS and	LF	48,353.000	427
	666	2307		REFL PAV MRK TYI(W)24"(SLD)90MIL)(OPT1) DOLLARS CENTS and	LF	161.000	428
	666	2308		REFL PAV MRK TYI(Y)24"(SLD)90MIL)(OPT1) DOLLARS CENTS and	LF	1,160.000	429
	666	2309		PAVEMENT SEALER 24"(OPT1) DOLLARS CENTS and	LF	861.000	430

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	666	2310		PAVEMENT SEALER(ARROW)(OPT1) DOLLARS and CENTS	EA	12.000	431
	666	2311		PAVEMENT SEALER(YLD TRI)(OPT1) DOLLARS and CENTS	EA	4.000	432
	668	2150		PREFAB PAV MRK TYC(W)(ARROW)(OPT1) DOLLARS and CENTS	EA	16.000	433
	668	2151		PREFAB PAV MRK TYC(W)(36")(YLD TRI)OPT1 DOLLARS and CENTS	EA	4.000	434
	672	2041	034	REFL PAV MRKR TY II-A-A(OPT1) DOLLARS and CENTS	EA	781.000	435
	672	2042	034	REFL PAV MRKR TY II-C-R(OPT1) DOLLARS and CENTS	EA	578.000	436
	677	2037		ELIM EXT PAV MRK & MRKS(4")(OPT1) DOLLARS and CENTS	LF	97,192.000	437
	677	2038		ELIM EXT PAV MRK & MRKS(8")(OPT1) DOLLARS and CENTS	LF	639.000	438
	677	2039		ELIM EXT PAV MRK & MRKS(24")(OPT1) DOLLARS and CENTS	LF	162.000	439
	677	2040		ELIM EXT PAV MRK & MRKS(ARROW)(OPT1) DOLLARS and CENTS	EA	11.000	440

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	677	2041		ELIM EXT PAV MRK & MRKS(WORD)(OPT1) DOLLARS and CENTS	EA	7.000	441
	678	2050		PAV SURF PREP FOR MRK(BLST CLN)(4")OPT1 DOLLARS and CENTS	LF	8,400.000	442
	678	2051		PAV SURF PREP FOR MRK(BLST CLN)24")OPT1 DOLLARS and CENTS	LF	666.000	443
	678	2052		PAV SURF PREP FOR MRK(BLST CLN)(8")OPT1 DOLLARS and CENTS	LF	4,700.000	444
	678	2053		PV SRF PREP FOR MRK(BLST CLN)ARRWS)OPT1 DOLLARS and CENTS	EA	11.000	445
	678	2054		PV SRF PREP FOR MRK(BLST CLN)WORDS)OPT1 DOLLARS and CENTS	EA	1.000	446
	678	2055		PV SRF PRP MRK(BLST CLN)36")YLD TR)OPT1 DOLLARS and CENTS	EA	4.000	447
	680	2006		INSTALL HWY TRF SIG(ISOLATED)(OPT1) DOLLARS and CENTS	EA	1.000	448
	682	2050	001	VEH SIG SEC(12IN)LED(GRN ARW)(OPT1) DOLLARS and CENTS	EA	4.000	449

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	682	2051	001	VEH SIG SEC(12IN)LED(GRN)(OPT1) DOLLARS and CENTS	EA	12.000	450
	682	2052	001	VEH SIG SEC(12IN)LED(YEL ARW)(OPT1) DOLLARS and CENTS	EA	4.000	451
	682	2053	001	VEH SIG SEC(12IN)LED(YEL)(OPT1) DOLLARS and CENTS	EA	12.000	452
	682	2054	001	VEH SIG SEC(12IN)LED(RED)(OPT1) DOLLARS and CENTS	EA	12.000	453
	682	2055	001	BACK PLATE(12IN)(3 SEC)ALUM(OPT1) DOLLARS and CENTS	EA	8.000	454
	682	2056	001	BACK PLATE(12IN)(5 SEC)ALUM(OPT1) DOLLARS and CENTS	EA	4.000	455
	684	2086		TRF SIG CBL(TYA)(12 AWG)(5 CONDR)(OPT1) DOLLARS and CENTS	LF	972.000	456
	684	2087		TRF SIG CBL(TYA)(12 AWG)(7 CONDR)(OPT1) DOLLARS and CENTS	LF	936.000	457
	686	2307		INS TRF SIG PL AM(S)STR(TYD)LUM(OPT1) DOLLARS and CENTS	EA	4.000	458
	740	2006	001	ANTI-GRAFFITI COATING(PERMA- NENT)(OPT1) DOLLARS and CENTS	SF	1,500.000	459



ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	3224	2069		D - GR HMA (QCQA) TY - B PG64 -22(OPT1) DOLLARS and CENTS	TON	15,388.000	460
	3224	2071		D-GR HMA(QCQA) TY-C SAC-B PG70- 22(OPT1) DOLLARS and CENTS	TON	10,216.000	461
	5049	2007		BIODGRDABLE EROSN CTRL LOGS(18IN)(OPT1) DOLLARS and CENTS	LF	756.000	462
	6006	2007		COAXIAL CABLE(OPT1) DOLLARS and CENTS	LF	70.000	463
	6006	2008		ANTENNA (UNI-DIRECTIONAL)(OPT1) DOLLARS and CENTS	EA	1.000	464
	6007	2002		REMOVING TRAFFIC SIGNALS(OPT1) DOLLARS and CENTS	EA	1.000	465
	6266	2017	017	VIVDS COMMUNICATION CBL(COAX- IAL)(OPT1) DOLLARS and CENTS	LF	906.000	466
	6266	2019	017	VIVDS PROCESSOR SYSTEM(OPT1) DOLLARS and CENTS	EA	1.000	467
	6266	2020	017	VIVDS CAMERA ASSEMBLY(OPT1) DOLLARS and CENTS	EA	4.000	468
	6266	2021	017	VIVDS SET-UP SYSTEM(OPT1) DOLLARS and CENTS	EA	1.000	469

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	6473	2029	001	MULTIPOLYMER PAV MRK(W)(4")(SLD)(OPT1)  and  DOLLARS CENTS	LF	27,822.000	470
	6473	2030	001	MULTIPOLYMER PAV MRK(W)(4")(BRK)(OPT1)  and  DOLLARS CENTS	LF	7,875.000	471
	6473	2031	001	MULTIPOLYMER PAV MRK(W)(8")(SLD)(OPT1)  and  DOLLARS CENTS	LF	8,300.000	472
	6473	2032	001	MULTIPOLYMER PAV MRK(Y)(4")(SLD)(OPT1)  and  DOLLARS CENTS	LF	32,311.000	473
	6473	2033	001	MULTIPOLYMER PAV MRK(Y)(4")(BRK)(OPT1)  and  DOLLARS CENTS	LF	2,425.000	474
	6473	2043	001	MULTIPLOYMER PAV MRK(W)(12")LNDP)(OPT1)  and  DOLLARS CENTS	LF	240.000	475
	8615	2002		RADAR ADVANCE DETECTION DEVICE(OPT1)  and  DOLLARS CENTS	EA	2.000	476
				OPTION 2  and  DOLLARS CENTS			
	100	2019	002	PREPARING ROW(OPT2)  and  DOLLARS CENTS	STA	87.000	477

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	110	2008		EXCAVATION(ROADWAY)(OPT2) DOLLARS and CENTS	CY	581,792.000	478
	132	2043		EMBANKMENT(FINAL)(DC)(TYB)(OPT2) DOLLARS and CENTS	CY	80,104.000	479
	160	2012		FURNISHING AND PLACE TOPSOIL(4")(OPT2) DOLLARS and CENTS	SY	150,422.000	480
	162	2007		BLOCK SODDING(OPT2) DOLLARS and CENTS	SY	256.000	481
	164	2063	004	DRILL SEED- ING(PERM)(RURAL)(CLAY)(OPT2) DOLLARS and CENTS	SY	150,422.000	482
	164	2064	004	DRILL SEEDING(TEMP)(WARM)(OPT2) DOLLARS and CENTS	SY	75,214.000	483
	164	2065	004	DRILL SEEDING(TEMP)(COOL)(OPT2) DOLLARS and CENTS	SY	75,214.000	484
	168	2003		VEGETATIVE WATERING(OPT2) DOLLARS and CENTS	MG	4,896.600	485
	169	2011	002	SOIL RETENTION BLAN- KETS(CL1)(TYA)(OPT2) DOLLARS and CENTS	SY	5,282.000	486
	169	2012	002	SOIL RETENTION BLAN- KETS(CL1)(TYC)(OPT2) DOLLARS and CENTS	SY	192.000	487

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	169	2013	002	SOIL RETENTION BLANKETS(CL2)(TYG)(OPT2)  DOLLARS CENTS and	SY	3,006.000	488
	192	2096		PLANT MATERIAL(15GAL)(TREE)(OPT2)  DOLLARS CENTS and	EA	39.000	489
	193	2039		PLANT MAINTENANCE(OPT2)  DOLLARS CENTS and	MO	9.000	490
	193	2040		VEGETATIVE WATERING(OPT2)  DOLLARS CENTS and	MG	26.000	491
	247	2409	040	FL BS(CMP IN PLC,TYD GR4)(FNL PS)(OPT2)  DOLLARS CENTS and	CY	27,812.000	492
	251	2315		REWRK BS MTL(TYC)(6")(OC)STKPL)(OPT2)  DOLLARS CENTS and	CY	1,621.000	493
	251	2316		REWRK BS MTL(TYC)(14")(STKPL)(OPT2)  DOLLARS CENTS and	SY	38,008.000	494
	276	2282		(PT MX,CLN, TYD,GR4)(FN POS)(OPT2)  DOLLARS CENTS and	CY	753.000	495
	305	2058		SALV,HAUL&STKPL RCL ASPH PV(0-2")(OPT2)  DOLLARS CENTS and	SY	52,986.000	496
	310	2029		PRIME COAT(MC-30 OR AE-P)(OPT2)  DOLLARS CENTS and	GAL	21,398.000	497

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	316	2727	016	ASPH(HFRS-2 OR CRS-2)(OPT2) DOLLARS and CENTS	GAL	42,673.000	498
	316	2728	016	AGGR(TYPD GR4 OR TYPL GR4)(SAC-B)(OPT2) DOLLARS and CENTS	CY	226.000	499
	316	2729	016	AGGR(TY-D GR4 OR TY-L GR4)(SAC-C)(OPT2) DOLLARS and CENTS	CY	813.000	500
	316	2730	016	ASPH(AC-15P,20-XP,10-2TR,12-5TR)(OPT2) DOLLARS and CENTS	GAL	9,878.000	501
	360	2078	003	CONC PVMT(CONT REINF-CRCP)(9")(OPT2) DOLLARS and CENTS	SY	5,231.000	502
	400	2022		CEM STABIL BKFL(OPT2) DOLLARS and CENTS	CY	955.800	503
	402	2005		TRENCH EXCAVATION PROTECTION(OPT2) DOLLARS and CENTS	LF	1,859.000	504
	403	2009		TEMPORARY SPL SHORING(OPT2) DOLLARS and CENTS	SF	17,379.000	505
	416	2071	001	DRILL SHAFT(18IN)(OPT2) DOLLARS and CENTS	LF	126.000	506
	416	2072	001	DRILL SHAFT(36IN)(OPT2) DOLLARS and CENTS	LF	558.000	507

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	416	2073	001	DRILL SHAFT(RDWY ILL POLE)(30IN)(OPT2) DOLLARS and CENTS	LF	192.000	508
	416	2075	001	DRILL SHAFT (SIGN MTS) (24 IN)(OPT2) DOLLARS and CENTS	LF	80.000	509
	420	2272	002	CL C CONC(ABUT)(OPT2) DOLLARS and CENTS	CY	118.400	510
	420	2273	002	CL C CONC(CAP)(OPT2) DOLLARS and CENTS	CY	36.200	511
	420	2274	002	CL C CONC(APPR SLAB)(OPT2) DOLLARS and CENTS	CY	175.100	512
	420	2275	002	CL C CONC(COLUMN)(OPT2) DOLLARS and CENTS	CY	66.700	513
	422	2009		REINF CONC SLAB(OPT2) DOLLARS and CENTS	SF	14,904.000	514
	423	2046		RETAINING WALL(MSE)(OPT2) DOLLARS and CENTS	SF	22,731.000	515
	425	2107	001	PRESTR CONC U-BEAM(U54)(OPT2) DOLLARS and CENTS	LF	966.680	516
	428	2004	001	CONC SURF TREAT(CLASS II)(OPT2) DOLLARS and CENTS	SY	1,686.000	517
	432	2110		RIPRAP (CONC) (4 IN) (OPT2) DOLLARS and CENTS	CY	1,472.400	518

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	432	2111		RIPRAP(STONE COMMON)(DRY)(6IN)(OPT2) DOLLARS and CENTS	CY	24.000	519
	432	2112		RIPRAP(STONE PROTECTION)(24IN)(OPT2) DOLLARS and CENTS	CY	22.000	520
	432	2113		RIPRAP(STONE PROTECTION)(30IN)(OPT2) DOLLARS and CENTS	CY	26.000	521
	432	2114		RIPRAP(CONC)(CL C)(OPT2) DOLLARS and CENTS	CY	20.790	522
	432	2115		RIPRAP(MOW STRIP)(5IN)(OPT2) DOLLARS and CENTS	CY	70.000	523
	432	2116		RIPRAP(CONC)(FLUME)(OPT2) DOLLARS and CENTS	CY	62.000	524
	442	2050	016	STR STL(MISCELLANEOUS)(OPT2) DOLLARS and CENTS	LB	1,360.000	525
	450	2619	001	RAIL(TY SSTR)(OPT2) DOLLARS and CENTS	LF	2,171.000	526
	450	2620	001	RAIL(TY PR1)(OPT2) DOLLARS and CENTS	LF	100.000	527
	450	2621	001	RAIL(TY C402)(OPT2) DOLLARS and CENTS	LF	404.000	528
	454	2025		SEALED EXPANSION JOINT(4")(SEJ-A)(OPT2) DOLLARS and CENTS	LF	156.000	529

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	462	2108		CONC BOX CULV(5FT X 3FT)(OPT2) DOLLARS and CENTS	LF	1,221.000	530
	462	2109		CONC BOX CULV(6FT X 3FT)(OPT2) DOLLARS and CENTS	LF	231.000	531
	464	2146	003	RC PIPE(CL III)(18IN)(OPT2) DOLLARS and CENTS	LF	413.000	532
	464	2147	003	RC PIPE(CL III)(24IN)(OPT2) DOLLARS and CENTS	LF	3,857.000	533
	464	2148	003	RC PIPE(CL III)(30IN)(OPT2) DOLLARS and CENTS	LF	458.000	534
	464	2149	003	RC PIPE(CL III)(36IN)(OPT2) DOLLARS and CENTS	LF	958.000	535
	464	2150	003	RC PIPE(CL III)(42IN)(OPT2) DOLLARS and CENTS	LF	209.000	536
	465	2718	001	INLET(COMPL)(TY H)(OPT2) DOLLARS and CENTS	EA	5.000	537
	465	2719	001	MANH(COMPL)(TY M)(OPT2) DOLLARS and CENTS	EA	1.000	538
	465	2720	001	MANH(COMPL)(CTB)(TY S)(OPT2) DOLLARS and CENTS	EA	4.000	539
	465	2721	001	INLET(COMPL)(CURB)(SPL)(OPT2) DOLLARS and CENTS	EA	10.000	540



ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	465	2722	001	INLET(COMPL)(DROP)(TY XXVI)(OPT2) DOLLARS and CENTS	EA	2.000	541
	465	2723	001	INLET(COMPL)(CURB)(TY IIR)(10FT)(OPT2) DOLLARS and CENTS	EA	4.000	542
	465	2724	001	INLET(COMPL)(CURB)(TY II)(10FT)(OPT2) DOLLARS and CENTS	EA	8.000	543
	465	2725	001	INLET(COMPL)(CURB)(TY II)(15FT)(OPT2) DOLLARS and CENTS	EA	9.000	544
	465	2726	001	INLET(COMPL)(CURB)(TY IIR)(15FT)(OPT2) DOLLARS and CENTS	EA	6.000	545
	465	2727	001	INLET(COMPL)(3)(OB)-02 FW(10FT)(OPT2) DOLLARS and CENTS	EA	17.000	546
	466	2317		WINGWALL(PW)(HW=8FT)(OPT2) DOLLARS and CENTS	EA	1.000	547
	466	2318		HEADWALL(CH-FW-0)(DIA=42IN)(OPT2) DOLLARS and CENTS	EA	1.000	548
	466	2319		HEADWALL(CH-PW-0)(DIA=42IN)(OPT2) DOLLARS and CENTS	EA	1.000	549
	467	2657		SET(TY I)(S=5FT)(HW=4FT)(4:1)(C)(OPT2) DOLLARS and CENTS	EA	3.000	550
	467	2658		SET(TY I)(S=5FT)(HW=5FT)(4:1)(C)(OPT2) DOLLARS and CENTS	EA	3.000	551

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	467	2659		SET(TY I)(S=6FT)(HW=4FT)(4:1)(C)(OPT2) DOLLARS and CENTS	EA	1.000	552
	467	2660		SET(TY II)(18IN)(RCP)(4:1)(C)(OPT2) DOLLARS and CENTS	EA	1.000	553
	467	2661		SET(TY II)(24IN)(RCP)(4:1)(C)(OPT2) DOLLARS and CENTS	EA	1.000	554
	467	2662		SET(TY II)(30IN)(RCP)(4:1)(C)(OPT2) DOLLARS and CENTS	EA	2.000	555
	467	2663		SET(TY II)(36IN)(RCP)(4:1)(C)(OPT2) DOLLARS and CENTS	EA	1.000	556
	467	2664		SET(TY II)(24IN)(RCP)(6:1)(C)(OPT2) DOLLARS and CENTS	EA	1.000	557
	467	2666		SET(TY II)(36IN)(RCP)(6:1)(P)(OPT2) DOLLARS and CENTS	EA	6.000	558
	467	2667		SET(TY II)(24 IN)(RCP)(6:1)(P)(OPT2) DOLLARS and CENTS	EA	4.000	559
	506	2067	011	ROCK FILTER DAMS(INSTALL)(TY 1)(OPT2) DOLLARS and CENTS	LF	189.000	560
	506	2068	011	ROCK FILTER DAMS(INSTALL)(TY 2)(OPT2) DOLLARS and CENTS	LF	105.000	561
	506	2069	011	ROCK FILTER DAMS(INSTALL)(TY 3)(OPT2) DOLLARS and CENTS	LF	73.000	562

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	506	2070	011	ROCK FILTER DAMS(REMOVE)(OPT2) DOLLARS and CENTS	LF	367.000	563
	506	2071	011	CONSTRUCTION EXITS(INSTALL)(TY1)(OPT2) DOLLARS and CENTS	SY	1,014.000	564
	506	2072	011	CONSTRUCTION EXITS(REMOVE)(OPT2) DOLLARS and CENTS	SY	1,014.000	565
	506	2073	011	TEMPORARY SEDIMENT CONTROL FENCE(OPT2) DOLLARS and CENTS	LF	15,408.000	566
	508	2010		CONSTRUCTION DETOURS (OPT2) DOLLARS and CENTS	SY	10,360.000	567
	512	2102	002	PORT CTB(DES SRCE)(SNGL SLP)(TY2)(OPT2) DOLLARS and CENTS	LF	7,500.000	568
	512	2103	002	PORT CTB(MOVE)(SNGL SLP)(TY2)(OPT2) DOLLARS and CENTS	LF	5,010.000	569
	512	2104	002	PORT CTB(REMOVE)(SNGL SLP)(TY2)(OPT2) DOLLARS and CENTS	LF	7,500.000	570
	528	2027		COLORLED TEXTURED CONC(4IN)(OPT2) DOLLARS and CENTS	SY	578.000	571
	528	2028		LANDSCAPE PAVERS(OPT2) DOLLARS and CENTS	SY	481.000	572

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	529	2089		CONC CURB & GUTTER(TY II)(OPT2) DOLLARS and CENTS	LF	15,153.000	573
	529	2090		CONC CURB (MONO)(TY II)(OPT2) DOLLARS and CENTS	LF	924.000	574
	529	2091		CONC CURB & GUTTER(TYI)(OPT2) DOLLARS and CENTS	LF	1,347.000	575
	530	2054		DRIVEWAYS AND TURNOUTS(CONC)(OPT2) DOLLARS and CENTS	SY	106.000	576
	530	2055		DRIVEWAYS AND TURNOUTS(ACP)(OPT2) DOLLARS and CENTS	SY	4,015.000	577
	531	2088		CONC SIDEWALK(4IN)(OPT2) DOLLARS and CENTS	SY	766.000	578
	531	2089		CURB RAMPS(TY 10)(OPT2) DOLLARS and CENTS	EA	35.000	579
	531	2090		CURB RAMPS(TY1)(OPT2) DOLLARS and CENTS	EA	1.000	580
	531	2091		CURB RAMPS(TY2)(OPT2) DOLLARS and CENTS	EA	4.000	581
	531	2092		CURB RAMPS(TY2)(MOD)(OPT2) DOLLARS and CENTS	EA	5.000	582

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	540	2040	023	MTL BEAM GD FEN TRANS(THRIE-BEAM)(OPT2)  DOLLARS and CENTS	EA	1.000	583
	540	2041	023	MTL W-BEAM GD FEN(STEEL POST)(OPT2)  DOLLARS and CENTS	LF	588.000	584
	540	2042	023	TERMINAL ANCHOR SECTION(OPT2)  DOLLARS and CENTS	EA	3.000	585
	540	2043	023	MTL BEAM FD FEN TRANS(TL2)(OPT2)  DOLLARS and CENTS	EA	2.000	586
	542	2007		REMOVING METAL BEAM GUARD FENCE(OPT2)  DOLLARS and CENTS	LF	189.000	587
	544	2019	001	GUARDRAIL END TREAT- MENT(INSTALL)(OPT2)  DOLLARS and CENTS	EA	6.000	588
	544	2020	001	GUARDRAIL END TREAT- MENT(REMOVE)(OPT2)  DOLLARS and CENTS	EA	2.000	589
	545	2077		CRASH CUSH ATTEN(INSTL)(WRK ZONE)(OPT2)  DOLLARS and CENTS	EA	14.000	590
	545	2078		CRASH CUSH ATTN(MOV&RSET)(WRK ZN)(OPT2)  DOLLARS and CENTS	EA	12.000	591

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	545	2079		CRASH CUSH ATTEN(REMOV)(WRK ZONE)(OPT2)  DOLLARS CENTS and	EA	14.000	592
	560	2037	001	MAILBX INSTALL-S(WC-POST)TY 3 FND(OPT2)  DOLLARS CENTS and	EA	3.000	593
	560	2038	001	MAILBX INSTL-M(TWW-PST)TY2 FND- TB(OPT2)  DOLLARS CENTS and	EA	8.000	594
	610	2107	010	INS RD IL AM(TY SA)40T-8(0.25KW)S(OPT2)  DOLLARS CENTS and	EA	24.000	595
	610	2108	010	REMOVE RD IL ASM(SHOE-BASE)(OPT2)  DOLLARS CENTS and	EA	1.000	596
	610	2109	010	INS RD IL AM(U/P)(TY1)(.15KW)S(OPT2)  DOLLARS CENTS and	EA	4.000	597
	618	2097		CONDT(PVC)(SCHD 40)(2")(OPT2)  DOLLARS CENTS and	LF	6,175.000	598
	620	2041	001	ELEC CONDR(NO.8)BARE(OPT2)  DOLLARS CENTS and	LF	6,630.000	599
	620	2042	001	ELEC CONDR(NO.8)INSULATED(OPT2)  DOLLARS CENTS and	LF	13,260.000	600
	620	2043	001	ELEC CONDR (NO.10) BARE(OPT2)  DOLLARS CENTS and	LF	69.000	601

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	620	2044	001	ELEC CONDR (NO.10) INSULATED(OPT2) DOLLARS and CENTS	LF	138.000	602
	624	2041	014	GROUND BOX TY A(122311)W/APRON(OPT2) DOLLARS and CENTS	EA	19.000	603
	628	2357	001	ELCSRV TYA240/480 060(NS)SS(E)SP(U)OPT2 DOLLARS and CENTS	EA	3.000	604
	636	2022	014	ALUMINUM SIGNS(TY A)(OPT2) DOLLARS and CENTS	SF	56.000	605
	636	2023	014	ALUMINUM SIGNS(TY G)(OPT2) DOLLARS and CENTS	SF	522.000	606
	644	2098		INS SM RD SN SUP&AM TY10BWG(1)SA(P)OPT2 DOLLARS and CENTS	EA	4.000	607
	644	2099		INS SM RD SN SUP&AM TY10BWG(1)SA(T)OPT2 DOLLARS and CENTS	EA	15.000	608
	644	2100		INS SM RD SN SUP&AM TYS80(1)SA(T)(OPT2) DOLLARS and CENTS	EA	6.000	609
	644	2101		INS SM RD SN SUP&AM TYS80(1)SA(U)(OPT2) DOLLARS and CENTS	EA	5.000	610
	644	2103		INS SM RD SN SP&AM TY TWT(1)WA(P)(OPT2) DOLLARS and CENTS	EA	34.000	611

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	644	2104		INS SM RD SN SP&AM TY TWT(1)WA(T)(OPT2)  DOLLARS CENTS and	EA	4.000	612
	644	2105		INS SM RD SN SUP&AM TY10BWG(1)SA(U)OPT2  DOLLARS CENTS and	EA	2.000	613
	644	2106		INS SM RD SN SUP&AM TYS80(1SA(U- EXAL)O2  DOLLARS CENTS and	EA	1.000	614
	644	2107		INS SM RD SN SUP&AM (RAIL MOUNT)(OPT2)  DOLLARS CENTS and	EA	2.000	615
	647	2010		INSTALL LRSS(STRUCT STEEL)(OPT2)  DOLLARS CENTS and	LB	2,937.100	616
	658	2389		INSTL OM ASSM(OM-2Z)(FLX)GND(OPT2)  DOLLARS CENTS and	EA	5.000	617
	658	2390		INSTL DEL ASSM(D-DW)SZ 1(FLX)GND(OPT2)  DOLLARS CENTS and	EA	22.000	618
	658	2391		INSTL DEL ASSM(D-SW)SZ 1(FLX)GND(OPT2)  DOLLARS CENTS and	EA	23.000	619
	662	2128		WK ZN PAV MRK NON- REMOV(W)4"(SLD)(OPT2)  DOLLARS CENTS and	LF	47,911.000	620



ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	662	2129		WK ZN PAV MRK NON- REMOV(W)8"(SLD)(OPT2)  and  DOLLARS CENTS	LF	915.000	621
	662	2130		WK ZN PAV MRK NON- REMOV(W)24"(SLD)(OPT2)  and  DOLLARS CENTS	LF	166.000	622
	662	2131		WK ZN PAV MRK NON- REMOV(W)(ARROW)(OPT2)  and  DOLLARS CENTS	EA	7.000	623
	662	2132		WK ZN PAV MRK NON- REMOV(W)(WORD)(OPT2)  and  DOLLARS CENTS	EA	8.000	624
	662	2133		WK ZN PAV MRK NON- REMOV(Y)4"(SLD)(OPT2)  and  DOLLARS CENTS	LF	55,732.000	625
	662	2134		WK ZN PAV MRK REMOV(W)4"(SLD)(OPT2) DOLLARS CENTS and	LF	1,117.000	626
	662	2135		WK ZN PAV MRK REMOV(W)8"(SLD)(OPT2) DOLLARS CENTS and	LF	113.000	627
	662	2136		WK ZN PAV MRK REMOV(W)24"(SLD)(OPT2) DOLLARS CENTS and	LF	52.000	628
	662	2137		WK ZN PAV MRK REMOV(W)(ARROW)(OPT2) DOLLARS CENTS and	EA	1.000	629

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	662	2138		WK ZN PAV MRK REMOV(W)(WORD)(OPT2) DOLLARS and CENTS	EA	1.000	630
	662	2139		WK ZN PAV MRK REMOV(Y)4"(SLD)(OPT2) DOLLARS and CENTS	LF	1,649.000	631
	662	2140		WK ZN PAV MRK NON- REMOV(W)4"(BRK)(OPT2) DOLLARS and CENTS	LF	1,280.000	632
	666	2312		REFL PAV MRK TYI(W)24"(SLD)90MIL)(OPT2) DOLLARS and CENTS	LF	789.000	633
	666	2313		REFL PAV MRK TYI(Y)24"(SLD)90MIL)(OPT2) DOLLARS and CENTS	LF	2,750.000	634
	666	2314		PAVEMENT SEALER 24"(OPT2) DOLLARS and CENTS	LF	1,509.000	635
	666	2315		PAVEMENT SEALER(ARROW)(OPT2) DOLLARS and CENTS	EA	19.000	636
	666	2316		PAVEMENT SEALER(WORD)(OPT2) DOLLARS and CENTS	EA	11.000	637
	666	2317		PAVEMENT SEALER(YLD TRI)(OPT2) DOLLARS and CENTS	EA	20.000	638
	668	2152		PREFAB PAV MRK TYC(W)(ARROW)(OPT2) DOLLARS and CENTS	EA	21.000	639

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	668	2153		PREFAB PAV MRK TYC(W)(WORD)(OPT2) DOLLARS and CENTS	EA	11.000	640
	668	2154		PREFAB PAV MRK TYC(W)(36")(YLD TRI)OPT2 DOLLARS and CENTS	EA	20.000	641
	672	2043	034	REFL PAV MRKR TY I-R(OPT2) DOLLARS and CENTS	EA	24.000	642
	672	2044	034	REFL PAV MRKR TY II-A-A(OPT2) DOLLARS and CENTS	EA	566.000	643
	672	2045	034	REFL PAV MRKR TY II-C-R(OPT2) DOLLARS and CENTS	EA	420.000	644
	677	2042		ELIM EXT PAV MRK & MRKS(4")(OPT2) DOLLARS and CENTS	LF	106,154.000	645
	677	2043		ELIM EXT PAV MRK & MRKS(8")(OPT2) DOLLARS and CENTS	LF	457.000	646
	677	2044		ELIM EXT PAV MRK & MRKS(24")(OPT2) DOLLARS and CENTS	LF	36.000	647
	677	2045		ELIM EXT PAV MRK & MRKS(ARROW)(OPT2) DOLLARS and CENTS	EA	4.000	648
	677	2046		ELIM EXT PAV MRK & MRKS(WORD)(OPT2) DOLLARS and CENTS	EA	4.000	649

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	678	2056		PAV SURF PREP FOR MRK(BLST CLN)(4")OPT2  DOLLARS CENTS and	LF	7,950.000	650
	678	2057		PAV SURF PREP FOR MRK(BLST CLN)24")OPT2  DOLLARS CENTS and	LF	686.000	651
	678	2058		PAV SURF PREP FOR MRK(BLST CLN)(8")OPT2  DOLLARS CENTS and	LF	4,100.000	652
	678	2059		PV SRF PREP FOR MRK(BLST CLN)ARRWS)OPT2  DOLLARS CENTS and	EA	11.000	653
	678	2060		PV SRF PREP FOR MRK(BLST CLN)WORDS)OPT2  DOLLARS CENTS and	EA	1.000	654
	678	2061		PV SRF PRP MRK(BLST CLN)36")YLD TR)OPT2  DOLLARS CENTS and	EA	4.000	655
	740	2007	001	ANTI-GRAFFITI COATING(PERMA- NENT)(OPT2)  DOLLARS CENTS and	SF	42,144.000	656
	3224	2070		D - GR HMA (QCQA) TY - B PG64 -22(OPT2) DOLLARS CENTS and	TON	20,659.000	657

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	3224	2072		D-GR HMA(QCQA) TY-C SAC-B PG70- 22(OPT2)  DOLLARS CENTS and	TON	10,784.000	658
	5049	2008		BIODGRDABLE EROSN CTRL LOGS(18IN)(OPT2)  DOLLARS CENTS and	LF	1,092.000	659
	5369	2002		CENTER LINE TEXTURING(OPT2)  DOLLARS CENTS and	STA	39.500	660
	6007	2003		REMOVING TRAFFIC SIGNALS(OPT2)  DOLLARS CENTS and	EA	1.000	661
	6473	2035	001	MULTIPOLYMER PAV MRK(W)(4")(SLD)(OPT2)  DOLLARS CENTS and	LF	28,896.000	662
	6473	2036	001	MULTIPOLYMER PAV MRK(W)(4")(BRK)(OPT2)  DOLLARS CENTS and	LF	2,418.000	663
	6473	2037	001	MULTIPOLYMER PAV MRK(W)(8")(SLD)(OPT2)  DOLLARS CENTS and	LF	7,627.000	664
	6473	2038	001	MULTIPOLYMER PAV MRK(W)(12")(SLD)(OPT2)  DOLLARS CENTS and	LF	2,155.000	665
	6473	2039	001	MULTIPOLYMER PAV MRK(Y)(4")(SLD)(OPT2)  DOLLARS CENTS and	LF	31,423.000	666

PROJECT DMO 2011(997) , ETC.  
COUNTY CORYELL , ETC.

PROPOSAL SHEET  
TxDOT  
FORM 234

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	6473	2040	001	MULTIPOLYMER PAV MRK(Y)(4")(BRK)(OPT2)  DOLLARS CENTS and	LF	1,275.000	667
	6473	2042	001	MULTIPOLYMER PAV MRK(W)(12")LNDP)(OPT2)  DOLLARS CENTS and	LF	471.000	668

COUNTY: CORYELL, ETC.

HIGHWAY: US 190

**GENERAL NOTES AND SPECIFICATION DATA**

Electronic Bidding System (EBS) will not be permitted on this Contract.

The project funding is \$42,911,000 and does not include Force Account work.

It is the Department's intent to award the Contract to the lowest Bidder for the Base Bid items plus Option 2 items, if lowest bid for the Base Bid items plus Option 2 items is under the programmed funding. If the low bid for the Base Bid items plus Option 2 items is not under the programmed funding, then the award will be to the lowest Bidder of the Base Bid items plus Option 1 items.

The bid will be considered incomplete and nonresponsive if all Base Bid items and Option items are not completed. See Section 2.14.E.

**SPECIFICATION DATA**  
**(PERCENT RETAINED-SIEVE)**

DESCRIPTION	2 1/2"	1 3/4"	#4	#40	PI MAX	PI MIN
<b>FLEXIBLE BASE (TYPE D, GRADE 4)</b>	0	0-5	45-75	70-85	12	4

1. This material shall be produced from a source, which when tested in accordance with Test Method Tex-117-E, Part 1, shall meet the requirements of Class 2.3 material.
2. This material shall be produced from a source, which when tested in accordance with Test Method Tex-116-E, the maximum Wet Ball Mill Value shall not exceed 45, and the maximum increase of material passing the No. 40 sieve shall not exceed 20 percent.
3. Job control samples for gradation and PI testing will be taken from the windrow after blade mixing.

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**BASIS OF ESTIMATE**  
**Base Bid with OPTION 1**

ITEM	DESCRIPTION	RATE	BASIS	QUANTITIES
*166	FERTILIZER (20-10-10)			
	TEMPORARY SEEDING	300.00 LB/AC	159.95 AC	23.99 TON
	PERMANENT SEEDING	300.00 LB/AC	159.95 AC	23.99 TON
168	VEGETATIVE WATERING	13,100 GAL/AC/APP	319.9 AC	25,143 MG
180	WILDFLOWER SEEDING	16.5 LBS/AC	70 AC	1,155 LBS
193	PLANT MAINTENANCE		9 MO	9.0 MO
216	PROOF ROLLING		30.0 HRS	30.0 HRS
247	FLEXIBLE BASE			
	(TY D GR 4 FINAL POS)	138.00 LB/CF		79,822 CY
310	PRIME COAT			
	MC-30 OR AE-P	0.20 GAL/SY	336,190 SY	67,238 GAL
316	SURFACE TREATMENTS			
	AGGREGATE (TY D GR 4 OR TY L GR 4)	1/125 CY/SY	291,718 SY	2,336 CY
	AGGREGATE (TY PD GR 4 OR TY PL GR 4)	1/125 CY/SY	39,266 SY	314 CY
316	SURFACE TREATMENTS			
	ASPHALT (AC-15P, AC-20XP, AC10-2TR, AC-12-5TR)	0.35 GAL/SY	39,266 SY	13,743 GAL
	ASPHALT (HFRS-2 OR CRS-2)	0.42 GAL/SY	291,718 SY	122,522 GAL
3224	D-GR HMA (QC/QA) TY-C	110 LB/CY/IN		32,888 TON
	D-GR HMA (QC/QA) TY-B	110 LB/CY/IN		57,949 TON

\* For Contractor's information, only

**BASIS OF ESTIMATE**  
**Base Bid with OPTION 2**

ITEM	DESCRIPTION	RATE	BASIS	QUANTITIES
*166	FERTILIZER (20-10-10)			
	TEMPORARY SEEDING	300.00 LB/AC	164.79 AC	24.72 TON
	PERMANENT SEEDING	300.00 LB/AC	164.79 AC	24.72 TON
168	VEGETATIVE WATERING	13,100 GAL/AC/APP	329.58 AC	25,905 MG
180	WILDFLOWER SEEDING	16.5 LBS/AC	70 AC	1,155 LBS
193	PLANT MAINTENANCE		9 MO	9.0 MO
216	PROOF ROLLING		30.0 HRS	30.0 HRS
247	FLEXIBLE BASE			
	(TY D GR 4 FINAL POS)	138.00 LB/CF		87,056 CY
310	PRIME COAT			
	MC-30 OR AE-P	0.20 GAL/SY	332,805 SY	66,561 GAL



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**BASIS OF ESTIMATE**  
**Base Bid with OPTION 2 (Continued)**

ITEM	DESCRIPTION	RATE	BASIS	QUANTITIES
316	SURFACE TREATMENT			
	AGGREGATE (TY D GR 4 OR TY L GR 4)	1/125 CY/SY	310,056 SY	2482 CY
	AGGREGATE (TY PD GR 4 OR TY PL GR 4)	1/125 CY/SY	38,465 SY	308 CY
	ASPHALT (AC-15P, AC-20XP, AC10-2TR, AC-12-5TR)	0.35 GAL/SY	38,465 SY	13,463 GAL
	ASPHALT (HFRS-2 OR CRS-2)	0.42 GAL/SY	310,056 SY	130,221 GAL
3224	SURFACE TREATMENT			
	D-GR HMA (QC/QA) TY-C	110 LB/CY/IN		33,456 TON
	D-GR HMA (QC/QA) TY-B	110 LB/CY/IN		63,220 TON

\* For Contractor's information, only

**GENERAL NOTES****LIST OF MODIFIED STANDARDS**

CURB INLET (SPECIAL) (MOD)-WACO STANDARD, SGEB (MOD), SGMD (MOD),  
 UBEB (MOD)

**GENERAL WASTE EXCAVATION OPERATIONS PLAN**

The work in the GWEOP will be accomplished by a combination of Force Account work and bid items as shown in the plans.

Perform waste excavation, relocation, and landfill remediation operations in compliance with applicable TCEQ regulations and current standards of practice in the industry, compatible with the design of the Right-of-Way (ROW) for use as a highway for US 190 Copperas Cove Bypass. Specific details are contained in the General Waste Excavation Operations Plan (GWEOP).

The work requires excavation and handling of waste, shaping and closing the excavation once complete, and covering the waste at the end of each day.

Solid waste will be relocated to the new site as shown in the plans. The exposed side slopes of the existing landfill and slopes formed by the relocated waste shall be capped with a final liner system of a material as shown in the GWEOP (Table 3-1) and specified in the Final Cover Quantity Control Plan.

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Materials for drainage controls shall be specified in the GWEOP.

Types of equipment anticipated to be used in day-to-day prosecution of the work may include: bulldozers (CAT D6 or equivalent), excavators (180 hp or equivalent), articulating trucks (CAT 725 or equivalent), motor graders (145 hp or equivalent), front-end loaders (140 hp or equivalent), pickup trucks, fuel truck, water truck, and a water pump. Actual equipment used onsite will be determined by the Contractor based upon site conditions and availability. Specific details can be obtained through the General Waste Operations Plan.

Perform all work required and as specified in the GWEOP. Inform the Engineer and inspect the site with the Engineer before beginning work. Inspect the site with the Engineer after the construction is complete. Project personnel must have specific training and certifications required by the GWEOP before beginning any work required.

Maintaining existing drainage throughout the excavation process is required to reduce the potential of flooding of the excavation. This will be accomplished with berms around the perimeter of the excavation to intercept overland surface drainage from entering the excavation. In addition, interior berms will be constructed in each of the sectors of the excavation in order to keep surface water from coming into contact with exposed waste during the excavation.

The excavation will be shaped and brought to the appropriate grades for subsequent construction of the Highway 190 Bypass through the closed landfill.

Follow all drainage requirements specified in the GWEOP, including stormwater run-on/runoff and leachate control measures.

Follow all testing, monitoring and reporting requirements as specified in the GWEOP. Provide a copy of all reports to the Engineer.

Prior to beginning any work in the area of landfill removal and remediation, a pre-work meeting is required to discuss all aspects of implementing the General Waste and Landfill Operations Plan.

Before beginning landfill related work and prior to the pre-work meeting, the Contractor shall provide a detailed sequence of work that includes all elements of the work included in the GWEOP. In addition, a safety and operational plan shall be provided in advance that indicates how the Contractor will comply with the requirements outlined in the GWEOP. The Contractor will be responsible for revising the TCEQ Authorization shown in the plans if the Contractor's proposed construction methods differ from what is approved. Any revisions shall be provided to the Engineer for approval.

All work related to removing, relocating and remediation of the existing landfill as specified in the plans has been included in the contract time determination for the project. The contractor will be required to plan for and implement concurrent operations to meet the contract time.

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Once the landfill related work is begun the Contractor shall continuously prosecute all elements of the landfill relocation and remediation, both force account and bid items included in the plans.

**ITEM 4: SCOPE OF WORK**

All new and existing concrete adjacent to the roadway must be free of stains, dirt, tire marks, etc., at the time of final acceptance. These items include, but are not limited to, bridge rails, curb and gutter, inlets, and riprap. Blast cleaning of these items will be required to achieve acceptance of the project and will be considered subsidiary to the applicable bid items.

Prior to final acceptance, all new structures and structures that have been extended shall be cleaned out by the Contractor. This work will not be paid directly, but will be considered subsidiary to the various bid items.

During final cleanup, the Contractor will be required to remove any foreign material that has accumulated at all bridge abutments and bent caps. The removal of foreign material shall be performed in a manner approved by the Engineer. All work and equipment involved in the removal of this material will be subsidiary to the various bid items of the Contract.

**ITEM 5: CONTROL OF THE WORK**

All elevations are based on USC & GS datum.

Prior to beginning work in the area of existing utilities, the Contractor shall consult with the utility companies and Fort Hood - Directorate of Public Works, Real Property Branch for exact locations to prevent any damage or interference with present facilities. This action shall in no way be interpreted as relieving the Contractor of his responsibilities, under the terms of the Contract and as set out in the plans and specifications. The Contractor shall repair any damage caused by his operations, at his own expense, and shall restore facilities to service in a timely manner.

**ITEM 6: CONTROL OF MATERIALS**

Mixing of materials, storing of materials, storing of equipment, or repairing of equipment on top of concrete pavement or bridge decks will not be permitted unless specifically authorized by the Engineer. Permission will be granted to store materials on surfaces if, in the opinion of the Engineer, no damage or discoloration will result.

References to manufacturer's trade name or catalog numbers are for the purpose of identification, only, and the Contractor will be permitted to furnish like materials of other manufacturers provided they are of equal quality, comply with specifications for this project, and are approved by the Engineer.

Submit all fabrication and shop drawings to TxDOT electronic shop drawing submission system. Additional information can be found at:

[http://www.txdot.gov/business/contractors\\_consultants/bridge/shop\\_drawings/default.htm](http://www.txdot.gov/business/contractors_consultants/bridge/shop_drawings/default.htm)

**COUNTY: CORYELL, ETC.****HIGHWAY: US 190****ITEM 7: LEGAL RELATIONS AND RESPONSIBILITIES**

The use of existing or new bridges for staging construction equipment or materials will not be permitted without written approval by the Engineer. To obtain this approval submit a working plan to the Engineer including loading information, spacing, and dimensions. This working plan must be signed and sealed by a licensed or registered Professional Engineer.

If utilizing private property for waste disposal sites, field office sites, equipment storage sites, or for any other purpose involved with this project, provide to the Engineer written proof of the property owner's approval for the use of this property. This proof may be in the form of a letter or agreement signed by the property owner or other documents acceptable to the Engineer.

Follow all local ordinances when burning cleared trees or brush. Contractor shall also obtain written permission from Fort Hood prior to burning.

Where existing pavement adjoins new pavement, saw the existing pavement to a neat transverse and/or longitudinal line to permit adequate joining. This will not be paid directly, but will be considered subsidiary to the various bid items.

Protect all adjoining pavement sections during all phases of construction. Any damages incurred due to Contractor's operation shall be repaired and/or replaced at the Contractor's expense.

All materials, labor, and incidentals required for the Contractor to provide for traffic across the highway and for all-weather ingress and egress to public and private property in accordance with Item 7.7 of the Standard Specifications shall be considered as incidental to the various bid items. When construction is complete, the access roadways will be restored to their original condition, as approved by the Engineer.

Personal vehicles of the Contractor's employees shall not be parked within the right-of-way at anytime including any section closed to public traffic, unless the vehicle is being utilized for construction procedures; however, the Contractor's employees may park on the right-of-way at the sites where the Contractor has his office, equipment, and materials storage yard.

The Contractor shall not initiate activities in a project specific location (PSL) associated with a U.S. Army Corps of Engineers (USACE) permit area that has not been previously evaluated by the USACE as part of the permit review of this project. Such activities include, but are not limited to, haul roads, equipment staging areas, borrow and disposal sites. Associated defined here means materials are delivered to or from the PSL. The permit area includes all waters of the U.S. or associated wetlands affected by activities associated with this project. Special restrictions may be required for such work. The Contractor shall be responsible for any and all consultations with the USACE regarding activities, including project specific locations (PSLs), which have not been previously evaluated by the USACE. The Contractor shall provide the Department with a copy of all consultation(s) or approval(s) from the USACE prior to initiating activities.

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The Contractor may proceed with activities in PSLs that do not affect a USACE permit area, if a self determination has been made that the PSL is non-jurisdictional or proper USACE clearances have been obtained in jurisdictional areas or have been previously evaluated by the USACE as part of the permit review of this project. The Contractor is solely responsible for documenting any determination(s) that their activities do not affect a USACE permit area. The Contractor shall maintain copies of their determination(s) for review by the Department or any regulatory agency.

The Contractor must document and coordinate with the USACE, if required, prior to any excavation hauled from or embankment hauled into a USACE permit area by either (1) or (2) below.

**(1) Restricted Use of Materials for the Previously Evaluated Permit Areas.** The Contractor will document both the project specific location (PSL) and their authorization. The Contractor will maintain copies for review by the Department or any regulatory agency. When an area within the project limits has been evaluated by the USACE as part of the permit process for this project:

- a. Suitable excavation of required material in the areas shown on the plans and cross sections as specified in Item 110 is used for permanent or temporary fill (Item 132, Embankment) within a USACE permit area;
- b. Suitable embankment (Item 132) from within the USACE permit area is used as fill within a USACE evaluated area; and,

Unsuitable excavation or excess excavation “waste” (Item 110, Excavation) that is disposed at a location approved by the Engineer within a USACE evaluated area.

**(2) Contractor Materials from Areas Other than Previously Evaluated Areas.** The Contractor will provide the Department with a copy of all USACE coordination or approval(s) prior to initiating any activities for an area within the project limits that has not been evaluated by the USACE or for any off right of way locations used for the following, but not limited to, haul roads, equipment staging areas, borrow and disposal sites:

- a. Item 132, Embankment, used for temporary or permanent fill within a USACE permit area; and,
- b. Unsuitable excavation or excess excavation “waste” (Item 110, Excavation) that is disposed outside a USACE evaluated area.

The total area disturbed for this project is 266 acres. The disturbed area in this project, all project locations in the Contract, and the Contractor project specific locations (PSLs), within 1 mile of the project limits, for the Contract will further establish the authorization requirements for stormwater discharges. The Department will obtain an authorization to discharge stormwater from the Texas Commission on Environmental Quality (TCEQ) for the construction activities shown on the plans. The Contractor is to obtain required authorization from the TCEQ for

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Contractor PSLs for construction support activities on or off the ROW. When the total area disturbed in the Contract and PSLs within 1 mile of the project limits exceeds 5 acres, provide a copy of the Contractor NOI to the Engineer and to the local government that operates a separate storm sewer system.

No vegetation clearing March 1 to September 15 from Station 255+00 to Station 290+00.

Clearing of vegetation within the proposed ROW will be limited to that necessary for constructing the proposed project.

Construction activities will be minimized in areas adjacent to occupied Black-Capped Vireo and Golden-Cheeked Warbler habitat. No project specific locations (PSLs) such as staging areas will be placed in these areas. These areas are from Station 255+00 to Station 290+00.

Construction between March 1 and September 15 would be restricted to daylight hours to prevent continuous disturbance. The limits of this restriction are from Station 255+00 to Station 290+00.

*Paragraph deleted.*

Type C temporary fencing may be required to keep livestock contained during construction. This shall be subsidiary to various bid items.

### **General Notes for Work in Waters of the US**

1. TxDOT will establish "limits of waters of the United States" to designate stream banks (Ordinary High Water Marks) and wetland boundaries for the project with wood lathing and flagging. These areas have specific Corps of Engineer 404 permit requirements as stated in the following notes.
2. For bridges, the Contractor shall provide and maintain orange plastic security fencing (called orange fencing) slightly above the Ordinary High Water Marks, on each side of the stream and from ROW line to ROW line. For culverts, the Contractor shall provide and maintain orange fencing slightly above the Ordinary High Water Marks, on each side of the stream on the upstream and downstream culvert ends outside the limits of permanent facilities to the ROW lines. No construction activities or access below the orange fencing shall be allowed, unless approved by TxDOT. The boundaries for wetland areas shall also be established with orange fencing and timber mats must be used to support heavy equipment.
3. The Contractor shall submit detailed site-specific plans for work in each "Water of the United States" designated on the EPIC sheet. These plans must be approved by the TxDOT Engineer prior to starting any work in these areas. The plans must also describe facilities and work activities adjacent the Ordinary High Water Marks. The plan must show actual dimensions and materials for:

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- proposed construction roads and work areas leading to or in close proximity the Ordinary High Water Marks
- temporary material or equipment storage areas in close proximity to the Ordinary High Water Marks
- locations of proposed sediment and erosion control devices
- identification of construction equipment and construction techniques to accomplish the work

Once this drawing and supporting information is reviewed and approved by TxDOT, all construction workers should be made aware of the limits designated on the drawings by the Contractor's supervision. Work in all Waters of the US will be limited to the minimum necessary required to construct the bridge, culvert or roadway fills. Work shall also include all activities needed for bridge and culvert demolitions. Working or disturbing soil in the stream channel outside the limits of the work plan will not be allowed. Orange fencing shall be provided and maintained to establish the TxDOT approved boundaries in which work may be conducted between the Ordinary High Water Marks.

4. Stormwater from disturbed soil areas draining toward wetlands shall be either re-routed or adequate sediment control devices installed to protect the wetland.
5. The Contractor shall select concrete bridge demolition methods that will meet all 404 requirements. Bridge demolition between Ordinary High Water Marks may typically include bridge slabs, girders, columns, and foundations. The use of jackhammers or crushing techniques shall be conducted over timber mats wide enough for the downed bridge and for access and use of construction equipment to remove the wrecked structure fully. Concrete structures requiring demolition shall not be fully processed into small pieces between the Ordinary High Water Marks. Large sections of the wrecked concrete structure should be lifted or moved to an upland area for further processing with the processing area using appropriate sediment control devices. Demolitions should be avoided during high stream levels. Efforts shall be made to minimize bridge rubble, including fine concrete materials produced through the demolition process, water from saw cutting activities or soils moved during demolition activities from entering the stream.
6. The construction or demolition of culverts should take place in a manner that does not block the flow in a 404 stream. Removal or demolition of bridge class culverts should be accomplished similar to bridge demolitions, but timber mats are not required. Efforts shall be made to minimize culvert rubble, including fine concrete materials produced through the demolition process, concrete saw cutting water or soils moved during demolition activities from entering the stream. Minimal stream channel disturbance should occur both upstream and downstream of culverts between the Ordinary High Water Marks.
7. No excavated material, including spoils from drill shafts shall be deposited within the Ordinary High Water Marks at any time. Excavated material shall be immediately hauled to an approved temporary upland material storage area on TxDOT ROW. Excess material shall

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be hauled from the project site or spread above the stream bank limits as directed by the TxDOT Engineer. Adequate stabilization and sediment control devices shall be provided for soil materials spread and graded above the stream bank limits on TxDOT ROW.

8. No equipment or chemicals shall be stored overnight within Waters of the US (between the Ordinary High Water Marks). Special care shall be taken to contain all sanitary waste, petroleum products, or chemicals from leaking or entering the stream. The Contractor shall make provisions to collect all construction related trash and debris each workday and to provide adequate containers for storage and removal.
9. Upon completion of work, all excess construction materials, construction debris, timber mats, shall be carefully removed from between the Ordinary High Water Marks of the stream while minimizing additional earth disturbance, protecting existing aquatic vegetation and limiting stream turbidity. Timber mats, located below the Ordinary High Water Marks shall be carefully removed by construction equipment located above the Ordinary High Water Marks. Stream shaping below the Ordinary High Water Marks, after removal of timber mats or other construction activities shall only be conducted when directed by TxDOT.
10. Adequate sediment and erosion control devices shall be installed to preclude sediment from entering the stream and to the requirements of the storm water permit. Continuous silt fences with angled end sections and/or rock filter dams shall be installed along the entire length of disturbed soils, slightly above and parallel the High Water Marks of the stream and upslope of orange fencing specified in Item 2. No rock filter dams or other controls shall be installed across 404 streams below the Ordinary High Water Marks for either bridge or culvert installations. Large diameter compost logs shall typically be used on the boundaries of timber mats located between the Ordinary High Water Marks. Vegetation shall be established as soon as possible, beginning immediately when areas are brought to the proper lines and grades. Soil retention blankets and channel liners are encouraged to minimize erosion and promote vegetation development.
11. During any construction or demolition operations, soil shall never be pushed from the high bank into the stream channel below the Ordinary High Water Marks. Soil may be removed and shaped, as necessary, along the stream bank slopes above the Ordinary High Water Marks to facilitate construction with excess material being moved to high ground.
12. Trees removed between the Ordinary High Water Marks shall be sawcut. No mobile construction equipment shall be used to remove vegetation between the Ordinary High Water Marks. Trees will be cut flush with the ground level and pulled above the Ordinary High Water Marks for further processing. Only trees designated by the TxDOT Engineer shall be removed. No chemicals or stump grinding shall be used between the Ordinary High Water Marks. Follow all local ordinances when burning cleared trees or brush.
13. No water shall be pumped from any Water of the US without a permit from the appropriate river authority or the Texas Commission on Environmental Quality. Upland stock tanks are exempt from this requirement.



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14. Temporary construction roads or ramps, if approved by the Engineer, shall be constructed of material that will not erode and transport fine grain sediment downstream under high flows. Acceptable earthwork materials shall be rock material of 4-in. to 6 inch diameter. The use of rock and inert materials such as structural steel sections, wood mats, concrete mats, filter fabrics, and concrete barriers shall be acceptable to build roads and ramps. Fills consisting of clay, sands or other fine grain materials shall not be used between the Ordinary High Water Marks. Loose earth materials generated by excavation between the Ordinary High Water Marks shall be re-compacted or moved to a high bank area before the end of each day. Temporary construction roads and ramps shall be removed as soon as possible and the stream channel returned to a near original condition. Earth materials (clays and sand) that fall from construction equipment onto roads or ramps, between the Ordinary High Water Marks, shall be cleaned and removed daily.
15. To facilitate culvert or bridge construction work, low stream flows may be temporarily pumped or routed around construction activities. Stream flow should not be stopped. To facilitate pumping or routing of low flows, whatever sumps or obstructions used to control the stream flow shall not be constructed of fine grained clays or sands.

The Contractor shall be familiar with the right-of-way map and the location of all the right-of-way monumentation.

Care shall be taken by the Contractor and subcontractors to protect and avoid disturbance to the right-of-way monumentation.

If right-of-way monumentation is disturbed by the Contractor, or subcontractor, the Contractor shall notify the Inspector. Monuments, which are disturbed by the Contractor, or subcontractor, shall be restored by a Registered Professional Land Surveyor designated by the Texas Department of Transportation District Surveyor at the expense of the Contractor.

#### **ITEM 8: PROSECUTIONS AND PROGRESS**

For this project, six-day workweek charges will be charged in accordance with Section 8.3.A.2., "Six-Day Workweek."

The following Milestone is intended to expedite construction in the described area. The Contractor shall have Old Copperas Cove Road and the segment of US 190 from Old Copperas Cove Road to existing US 190, east of the City of Copperas Cove, open to eastbound traffic by February 1, 2013. Each working day after by February 1, 2013, that the area is not substantially complete and open to traffic will result in a disincentive applied at a rate of \$1,000 per working day. If requested, the Engineer may allow the use of full-depth hot-mix (in lieu of other base layers) to expedite work for this Milestone area.

Prior to Contract letting, the conceptual construction schedule as developed for the Contract Time Determination will be made available by the Department at the Area Engineer's office for prospective Bidder's review. The schedule will be in hard copy form and made available for

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copying by the Contractor. This supplied schedule is for informational purposes, only. It is the responsibility of the prospective Bidder to determine a construction schedule for the work in this Contract.

In addition to the requirements in Special Provisions to Item 8, construction schedules provided by the Contractor shall include line items required to maintain compliance with the stormwater permit. Those line items shall include, but not be limited to installing/removing stormwater sediment controls, installing soil retention blankets/channel liners, topsoil/compost placement, seeding (temporary and permanent), and placement of permanent erosion controls, earthwork and grading.

The Contractor will be expected to schedule this work so that the base placement operations will follow the subgrade work as closely as practical in order to reduce the hazard to the traveling public and prevent undue delay from wet weather.

Work requiring lane closures on US 190 will be restricted to the nights indicated:

SUNDAY	10 PM	–	MONDAY	5 AM
MONDAY	7 PM	–	TUESDAY	5 AM
TUESDAY	7 PM	–	WEDNESDAY	5 AM
WEDNESDAY	7 PM	–	THURSDAY	5 AM
THURSDAY	7 PM	–	FRIDAY	5 AM

Supplemental lighting in addition to lighting on equipment and work vehicles will be required to insure adequate lighting for workers safety and inspection. All operations including planning, underseal and HMAC placement must be adequately lighted using supplemental lighting of the “balloon type.” This is subject to the approval of the Engineer. This is considered subsidiary to the various bid Items of the Contract.

Placement of traffic control devices for night operations shall not commence until after the start time and all devices shall be removed from the roadway prior to the finish time. All other work not requiring lane closures can be done during daytime work hours.

No lane, ramp, or freeway closures on US 190 will be allowed at any hour during the week between Christmas Eve and New Year’s Day and the Wednesday before Thanksgiving to the following Sunday.

In the event utility lines needing unforeseen adjustments are encountered during construction operations, alter operations and continue to prosecute the Contract in such a manner that will allow utility adjustments to be made by others

For all subcontracts, physically attach all provisions listed in the “Contractor’s Assurance” to the subcontract agreement. Provide a copy of subcontracts, with attachments, for all DBE

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Subcontractors. Submit the subcontracts to the Engineer when submitting the subcontract approval request.

**ITEM 100: PREPARING RIGHT OF WAY**

Preserve trees within temporary construction easements in accordance with Item 100, Article 100.2., unless otherwise directed by the Engineer. Prune trees designated for preservation as directed by the Engineer. All work required in preserving and pruning trees shall be included in the price bid for Item 100.

The removal of trees and vegetation shall be subsidiary to Item 100. Preserve all hardwood trees designated by the Engineer.

The removal of any existing or temporary fence will not be paid directly, but shall be considered subsidiary to the bid Item 100, "Preparing Right of Way."

All trees and brush removed each day shall be disposed within the same day of removal, unless otherwise approved by the Engineer. Contractor shall shred all trees and brush. No burning will be allowed, unless approved by the Engineer and Fort Hood.

The Contractor is prohibited from removing grass vegetation throughout the entire project limits and then ceasing construction for long periods, typically over three weeks. The Contractor schedule shall be developed based on staged vegetation removal, limiting disturbed soil to no more than 25 percent at one time, unless otherwise approved by the Engineer. Should the Contractor not be able to control sediment and erosion adequately for areas disturbed, TxDOT shall substantially reduce the size of soil areas that the Contractor may disturb. Should the project be evaluated to have sediment control problems as a result of the Contractor disturbing excessive amounts of soil, the Contractor shall be required to immediately re-vegetate (seed and water) those disturbed areas at no cost to TxDOT.

All pipe culverts removed under this Contract shall become the property of the Contractor to be disposed off the right of way, unless otherwise directed by Engineer.

The price bid for Prep ROW from Station 102+00 to Station 120+00 shall include the city owned property to be used for landfill remediation.

**ITEM 110: EXCAVATION**

Proof roll the completed subgrade to locate unstable areas. Proof rolling shall be in accordance with Item 216 "Proof Rolling."

**ITEM 132: EMBANKMENT**

Proof roll the completed subgrade to locate unstable areas. Proof rolling shall be in accordance with Item 216 "Proof Rolling."

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Embankment Ty. C will serve as the 1 ft.- 6 in. compacted clay liner layer for the landfill area. This material must meet the following requirements:

- Plasticity Index > 15
- Liquid Limit > 30
- Percent Passing No. 200 Sieve > 30%
- Particle Size < 1 inch
- Hydraulic Conductivity  $\leq 1 \times 10^{-5}$  cm/sec

**ITEM 110 AND 132: EXCAVATION AND EMBANKMENT**

In those cases where fixed features require, the governing slopes indicated on the cross sections may be varied between the limits and to the extent determined by the Engineer.

Prior to Contract letting, one copy of the earthwork cross sections will be made available by the Department at the Area Engineer's office for prospective Bidders review. Earthwork construction, cross-section data is also available to the Contractor on a Department-furnished compact disc at the Area Engineer's office. This supplied cross-section plot or computer data is for non-construction purposes, only, and is the responsibility of the prospective Bidder to validate the supplied plot or data with the accompanying plans, specifications, and estimates for this Contract.

In a cut section where, in the opinion of the Engineer, the soil encountered in the subgrade is unstable for reason other than excess moisture, undercut this material for a minimum depth of 1-foot and a maximum depth as determined by the Engineer and replace with material having a PI of 5 to 25. This required undercutting will be paid under Item 110, "Excavation." Replacement of more suitable material will be paid under Item 132, "Embankment."

All pavement and base on existing driveways and intersecting roadways within the limits of the proposed subgrade shall be removed including when proposed subgrade elevations are above existing pavement. Existing subgrade in these areas shall be scarified and loosened to a depth of 12 inches before adding embankment or compacting excavation.

Design cross-sections and cross-section data will be provided to the Contractor by TxDOT post letting and shall be used to stake the lines and grades for the project, as directed by the Engineer.

When excavation is required to adjust stream flow lines at culvert ends, flatten the side slopes of channels and the back slopes of parallel ditches to the maximum extent possible within the existing right of way and channel easements.

*Deleted paragraph*

**ITEM 160: TOPSOIL**

Salvage the existing topsoil from the cut/fill areas. Stockpile the salvaged topsoil material at locations as approved by the Engineer. Topsoil shall not be used for general fill, unless there is

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an excess quantity of topsoil and use is approved by TxDOT. Topsoil stockpiles or topsoil placed along the ROW lines in windrows shall be temporarily seeded to meet stormwater permit requirements. Additional offsite topsoil is likely to be required to complete work for this Item.

Additional topsoil needed for this Item, shall come from approved sources outside of the ROW. Topsoil must come from a location within 6-in. of the natural ground surface to ensure it contains nutrients and is not sterile soil. Off ROW topsoil shall contain a minimum organic content of 3.5%, based on soil test results (testing to be conducted at the Contractor's expense).

**ITEM 162: SODDING FOR EROSION CONTROL**

Block sod (Bermuda grass) shall be cynodon dactylon Bermuda grass cut to a minimum depth (thickness) of 1 inch. The sod shall have the following characteristics: (1) uniformity; (2) good color; (3) free of weeds, weed seed, insects, and disease; (4) healthy, virile root system of dense, thickly matted roots throughout the soil of the sod; (5) adequate moisture to prevent drying out by exposure to the air and sun to the extent as to damage sod.

Prior to laying the block sod, blade the area and rake smooth. Refer to the plans and details for areas to receive the sod. Remove 1-in. of soil along paved edges and curb lines before laying sod and dress the slope to match all exposed edges after placing the sod.

**ITEM 164: SEEDING FOR EROSION CONTROL**

Final grading and stabilization (seeding) shall be achieved as soon as possible and not scheduled only for the end of the project. Final grading and stabilization should be initiated as the overall work progresses and should be scheduled in sequence with completion of base course installation. Final grading and stabilization shall be included as separate line items in the project schedule.

Multiple mobilizations of the seeding crews will be expected to comply with the Construction General Permit of the Texas Pollution Elimination Discharge System requirements for re-vegetating disturbed soils.

Install temporary seeding on topsoil stockpiles that are unused for more than 21 days.

Temporary seeding mixtures (cool and warm) shall also include 3 lbs. of Bermuda grass seed per acre, with all seeds being planted concurrently.

Temporary cool seed mixtures shall be as stated in the specification or at the option of TxDOT a direct substitution of 30 lbs. per acre of Dwarf Annual Ryegrass (Axcella 2 variety) including the 3 lbs. of Bermuda grass seed shall be planted.

For drill seeding installations, the pasture or rangeland type drill shall have a minimum of three seeding compartments to separate the fine and fluffy seeds and must be capable of being calibrated so the seed mixtures will be planted uniformly.

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Vegetative watering shall not begin on permanent seeding until at least a half-inch rainfall is received.

**ITEM 166: FERTILIZER**

Fertilizer shall be used for permanent and temporary seeding.

**ITEM 168: VEGETATIVE WATERING**

Watering between December 1 and February 1 can begin on seeded areas upon planting and before a natural rainfall. During other planting periods, unless approved by TxDOT, vegetation watering by means of water trucks shall not be started on newly planted seeds until a natural rain of ½-inch has occurred after planting.

**ITEM 180: WILDFLOWER SEEDING**

Wildflower seeding operations shall be separate from the permanent grass seeding operations and shall be performed in the fall between the months of September and November. Locations for wildflower seeding shall be between the main lanes and frontage roads as directed by the Engineer. Wildflower seed shall be sown at the recommended depth using a no-till drill seeder.

The wildflower seeding area shall be the same area as permanent seeding.

The species shall be a Texas mix, including but not limited to: Texas Bluebonnet (*Lupinus texensis*) minimum 16½ pounds PLS per acre, Pink Evening Primrose (*Oenothera speciosa*) minimum 1 pound PLS per acre, Indian Paintbrush (*Castilleja indivisa*) minimum 1/4 pound PLS per acre and Indian Blanket (*Gaillardia pulchella*) minimum 10 pounds PLS per acre.

Approved sources are:

Wildseed Farms  
425 Wildflower Hills  
Fredericksburg, TX 78624  
800-848-0078

Native American Seed  
127 N. 16<sup>th</sup> St.  
Junction, TX 76849  
800-728-4043

Applewood Seed Co.  
5380 Vivian Street  
Arvada, CO 80002  
303-431-7333

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**ITEM 192: LANDSCAPE PLANTING**

**ITEM 193: LANDSCAPE ESTABLISHMENT**

Landscape planting shall take place between October 15 and March 15. Planting should take place during the dates above and soon after grading of the planting area is complete. Plant maintenance and establishment is a total of 12 months after initial planting is complete. Initial planting, maintenance and establishment shall be scheduled by the Contractor to be complete prior to the end of the construction project. Contractor's work schedule shall indicate when this work will be achieved.

Provide 48 hours notification to the Engineer of the time that plant maintenance will be conducted so that an inspector may be present during these activities. The Engineer may withhold monthly payment for landscape establishment, if the Engineer is not adequately notified of the Contractor's maintenance activities.

**ITEM 247: FLEXIBLE BASE**

Place the material in approximately equal courses not to exceed 5 inches in depth per course. During mixing and laying operations, sufficient water shall be added to the material to ensure that the moisture content is not less than optimum moisture as determined by Test Method Tex-113-E.

*Paragraph deleted.*

The excess excavated material for this project may be suitable for use under this Item provided the quality of the crushed material meets the specification data given for this Item. Determination of the quality of the material will be the responsibility of the Contractor.

**ITEM 251: REWORKING BASE COURSES**

Salvaged material shall remain the property of the Department and shall be stockpiled within a 10 mile radius of the project at locations determined by the Engineer. Stockpile salvaged material using a front-end loader at stockpile site in a manner approved by the Engineer. No stockpiles will be allowed between Old Copperas Cove Road and US 190 east of the City of Copperas Cove.

Some patches of cement or stabilized base may be encountered while salvaging the existing base. If such material is encountered, it will be removed and disposed as directed by the Engineer. This work will not be paid directly, but will be subsidiary to Item 251.

Indicated quantities of flexible base to be salvaged are for estimating purposes, only. Salvage all acceptable base material encountered in the existing base, including intersection areas, as directed by the Engineer regardless of quantities involved. This work shall be paid as specified in Item 251.

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The flexible base used in the detour shall become the property of the Department once the detour is no longer needed. Salvage this material and stockpile at a location approved by the Engineer. This work will be paid under Item 251.

**ITEM 276: CEMENT TREATED BASE**

Flexible base used under this Item shall consist of Type D, Grade 4, Triaxial Class 2.3. Treat base material with 4.5% hydraulic cement to meet strength requirements. Cure the cement-treated material with an application of PCE, AEP, SS-1, CSS-2 or other asphaltic material approved by the Engineer at a rate not to exceed 0.2 gal/sy. The material and application for curing will not be paid directly, but will be considered subsidiary to Item 276. Material shall be placed in one 6-inch lift.

Wet construction joints between new base and base previously placed and coat with dry cement prior to the addition of new base.

**ITEM 305: SALVAGING, HAULING, AND STOCKPIILING RECLAIMABLE ASPHALTIC PAVEMENT**

Stockpile the material from the top 2 inches of existing asphalt pavement separately from lower layers. Stockpile RAP not incorporated into the project along the project right of way that will not be disturbed by the construction and other locations within 10 miles. No stockpiles will be allowed between Old Copperas Cove Road and US 190 east of the City of Copperas Cove. Neatly shape the stockpile using a front-end loader or other similar equipment as directed by the Engineer.

RAP from the project is suitable for reuse into all HMAC mixtures; however, RAP containing siliceous aggregates will not be allowed for reuse in HMAC mixes.

**ITEM 310: PRIME COAT****ITEM 316: SURFACE TREATMENTS****ITEM 3224: DENSE-GRADED HOT-MIX ASPHALT (QC/QA)**

The Contractor may request approval from TxDOT to clean equipment located on TxDOT ROW, which is engaged in asphalt work such as trucks, lay down machines, and distributors. TxDOT may allow cleaning of asphalt equipment on TxDOT ROW only when all of the following conditions are met on a continuous basis:

1. Cleanup activities must take place no closer than 300 feet from an off ROW drainage discharge.
2. No diesel or fuel is used for cleaning.
3. The names of all cleaning agents have been previously submitted to TxDOT and the Contractor has submitted both a spill prevention and cleanup plan for the cleaning chemicals being used.



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4. All excess cleaning liquid must be captured on plastic or tarps and disposed of properly off ROW.
5. Excess asphaltic products originally planned to be used for road construction, but deposited along the roadway edge due to having too much material, or due to equipment start/stops and minor equipment upsets shall be properly removed off ROW or to a location approved by TxDOT within 48 hours.

**ITEM 310: PRIME COAT**

When cutback asphalt is used, a minimum curing time of 7 days shall be required before application of Item 316, unless otherwise authorized or directed by the Engineer in writing.

**ITEM 316: SURFACE TREATMENTS**

No asphalt treatments shall be applied just prior to a rain event that could result in chemical asphalt or any asphalt by-product pollutant being washed into a stream.

No asphalt for surface treatment items will be placed between October 1 and April 1 for emulsions and October 1 and May 15 for AC asphalts, unless approved by the Engineer in writing.

All trucks hauling materials to be paid by truck measurement shall be “struck off” prior to delivery to the project.

Protect all existing bridges, curbs, and other exposed concrete surfaces within the limits of these projects as much as practicable from asphalt materials by any method that is acceptable to the Engineer. Remove any excessive asphalt materials deposited on these surfaces in a manner approved by the Engineer at the Contractor’s expense.

If existing conditions warrant during application of the surface treatment, the lane widths, transitions, and intersection areas may be varied as directed by the Engineer.

Use a medium pneumatic roller meeting the requirements of Item 210 as directed by the Engineer. This work will be subsidiary to the various bid items.

All aggregate shall come from the same source or blended sources.

Remove dirt and debris that has accumulated in the curb and gutter sections prior to beginning paving. Likewise, remove all vegetation from pavement edges prior to seal coat operations. This work will be subsidiary to other items.

**ITEM 360: CONCRETE PAVEMENT**

Contractor personnel performing job-control testing on concrete must be ACI-Certified. Provide a copy of the certification paper to the Engineer upon arrival and before testing at jobsite.

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Furnish hard copies of calibration reports for testing equipment when non-TxDOT approved equipment is used to test concrete.

Maintain on the jobsite sufficient polyethylene fabric, as directed by the Engineer, to cover a minimum area of concrete pavement 600 feet long and 25 feet wide.

The coarse aggregates used in the concrete paving mixture shall produce concrete with a coefficient of thermal expansion (CoTE) not greater than  $6.0 \times 10^{-6}$  inch/inch/°F when tested in accordance with Test Method Tex-428-A. Specimens shall be made and cured in accordance with Test Method-Tex-447-A and be at least 7 days old before testing. The Construction Division will perform all testing for CoTE for aggregate acceptance and test results shall be final.

When conventional paving methods (forms) are approved by the Engineer, a longitudinal finishing machine will be required. The longitudinal finishing machine shall be provided with a longitudinal float not less than 10 feet in length, adjusted to a true plane. It shall be power driven and mounted in a substantial frame equipped to ride on forms and shall be so designed and operated as to finish the required grade. In lieu of the longitudinal finishing machine, the Contractor may use a longitudinal trans-angular float, which is adjustable to crown and grade. This type of float is also known by various trade names such as V Finisher, Lewis Trans-angular Finisher, C.M.I. Tube float, etc. The operation of the longitudinal trans-angular float shall be as approved by the Engineer.

Place construction, sawed and construction joints in accordance with the Pavement Detail sheet and as directed. Joint locations, other than as shown on the plans, are subject to approval. Pavement leaveouts are required on this project as necessary to provide for traffic at driveways and side streets as shown in the plans or as directed. The cost of providing these leaveouts, including the construction of a suitable crossover connection at each site, is not paid directly, but is considered subsidiary to this Item.

All joint locations and leaveouts shall be shown on the submitted paving plan required by this Item. The requirement of Item 585, Ride Quality for Pavement Surfaces, will be enforced regardless of the presences of construction joints.

Concrete curing compounds shall not be applied in a manner that the chemical will be spilled, dripped, or discharged into streams. Containers and rags used during application of curing compound shall be properly disposed off the project. Do not store curing compound containers and drums on TxDOT ROW.

**ITEM 400: EXCAVATION AND BACKFILL FOR STRUCTURES**

Aggregate for cement-stabilized backfill shall be Grade 3, 4, or 5 coarse aggregate shown in Item 421, "Hydraulic Cement Concrete."

Class B bedding is required, if rock is encountered.

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**ITEM 416: DRILLED SHAFT FOUNDATIONS**

**ITEM 420: CONCRETE STRUCTURES**

**ITEM 430: EXTENDING CONCRETE STRUCTURES**

Column lengths shown on the plans shall be used to calculate the top of drilled shaft elevations for the determination of pay quantities. Pay quantity for bent concrete shall be plan quantity.

Soil from foundation drilling shall be removed immediately from the stream channel area to higher ground above the Ordinary High Water Marks. No earth drill spoil material shall be deposited into water of a stream. If used, drilling mud will not be allowed to enter into any stream.

**ITEM 420: CONCRETE STRUCTURES**

The Contractor's attention is called to the fact that conduit and junction boxes for illumination or other purposes may be required in the construction of the bridge slabs, columns, caps or other parts of the bridge structure(s). Refer to the bridge and illumination layouts for details.

Reduce headwall heights, if necessary, to provide a maximum of 3 inches projection above the roadway slope. No increase or decrease will be made in plan quantities of concrete or reinforcing steel for this work.

Paint the Control-Section-Structure (CSS) number on the right side of each approach end of finished bridges or culverts, using black exterior paint and stencils that result in two-inch high numbers. All numbers should be legible and free of smears or drips. Unless otherwise directed by the Engineer, the nine-digit CSS number shall be placed within two feet of the end of each bridge type as follows: concrete or steel girder bridge on outside of girder, slab-type bridge on outside of slab, bridge class culverts on outside of headwall. The painting of these numbers will not be paid directly, but will be considered subsidiary to the various bid items.

All construction products used to construct concrete structures and bridges including but not limited to plastics, Styrofoam, grease, glues, caulking, adhesives, solvents, paints, cleaning agents, and rubber shall be handled in a manner that the construction products or empty containers/tubes shall not be allowed into any stream. Construction debris developed from the cutting, grinding or sizing of solid construction products including plastics and Styrofoam shall not be allowed on the ground or to blow into a stream.

Concrete curing compounds shall not be applied in a manner that the chemical will be spilled, dripped, or discharged into streams. Containers and rags used during application of curing compound shall be properly disposed off the project. Do not store curing compound containers and drums on TxDOT ROW.

Ensure steel forms are free of rust immediately prior to placing concrete.

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Refer to Item 427, "Surface Finishes for Concrete" for additional requirement for formwork, concrete curing, and form removal for off-the-form finishes.

Submit a written work plans to the Engineer including materials and construction methods that affect the quality of the concrete finish. Prior to construction of any cast-in-place concrete, construct mock-up elements as indicated to simulate the materials and methods intended for use and demonstrate the adequacy of the concrete surface.

Mock-up construction is subsidiary to Item 420 and will not be paid directly. The mock-up shall include, at a minimum, at least 6-ft of column height. Construct the mock-ups using the proposed concrete mix, forming material, joint sealer (if used), form release agent, and all other construction procedures (including curing) listed in the work plan. Use the same surface finishes outlined in Item 427. Submit a written repair procedure with materials and methods used that is in accordance with these General Notes and Specifications and Standard Specification Item 427. Apply this repair procedure to each mock-up for concurrence by the Engineer. Use this repair procedure for all "Surface Area I" concrete on the project, unless amended by the Engineer.

The finish quality of the mock-up concrete (including repairs) shall have a pleasing and uniform appearance as described above prior to construction of any columns or caps. A new mockup may be necessary if the finish, as determined by the Engineer, is not adequate or if other materials and procedures are intended for use or are changed during the course of construction. The mock-up shall remain on the job and serve as a benchmark for satisfactory appearance.

Prior to mock-up construction, attend a pre-concrete forming and finishing conference at the jobsite. All project supervisory personnel involved in the construction of cast-in-place concrete are required to attend this conference. This conference shall include discussion on the Contractor's plan for insuring that single concrete bridge structure elements placed in multiple placements are produces with identical concrete materials, without variations or changes in material amounts, placed in a manner to provide a uniform color surface finish without variations between placements.

Mass concrete will be a Plans Quantity item.

#### **ITEM 420, 423, 450 & 514: RAILING AND PERMANENT CONCRETE TRAFFIC BARRIERS**

White hydraulic cement will be required for all traffic rails, bridge rails, retaining wall copings, retaining wall pilasters, and permanent traffic barriers, unless the optional finish specified under Item 427 is used.

Blast clean all railing, barrier wall, and retaining wall copings in accordance with Item 427 prior to final acceptance of the project when white cement is used. This work will be considered subsidiary to Items 420, 423, 450, and 514.

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All barriers shall be slipped form or cast in place. Insure slip formed barrier and cast-in-place barrier will be uniform in color and texture.

When supplying aggregates from a source that is excluded from using Option 7 for ASR mitigation, substitute fly ash for Portland cement at a rate of 20 percent of the cement. No changes to the aggregate sources or fly ash source will be allowed, unless approved by the Engineer in writing.

Use an approved UV disappearing curing compound rather than the standard approved curing compounds for structures receiving opaque sealer coating/finish.

**ITEM 421: HYDRAULIC CEMENT CONCRETE**

Entrained air is required in all slip formed concrete (bridge rail, concrete traffic barrier, pavement, etc.), but is not required for other concrete. The entrained air is required for workability purposes. Provide coarse aggregate with a 5-cycle magnesium sulfate soundness when tested in accordance with Tex 411-A of not more than 25%. Adjust the dosage of air entraining agent for low air content as directed or allowed by the Engineer. If entrained air is provided where not required, only the upper limits of the Special Provision will be enforced.

The Contractor will provide compressive strength testing equipment with a laser printer including all interface software and accessories.

**ITEM 423: RETAINING WALLS**

Use Type A backfill when constructing MSE retaining walls.

Six inch (6") perforated pipe underdrain, as per MSE Wall Standard sheet, will be required. Pipe outfall should be terminated into wall of drainage structures, as approved by the Engineer. Pipe underdrain for retaining walls shall be subsidiary to Item 423.

The surface texture shall be a rectangular Ashlar Special finish (for both MSE and soil nail walls) using a formliner approved by the Engineer. The formliner used shall have a minimum 2-inch relief and shall appear as a rough chiseled rock. The individual rocks shall range in size from: height minimum 6 to 18 inches and width minimum 12 to 60 inches. Individual rock's width is to be greater than height. The interior mortar joints shall be 1 inch (squared rather than curved). The Contractor will cast a minimum 5-ft x 5-ft sample panel for approval by the Engineer prior to whole scale casting.

The Texas Emblem shown on the Standard sheets for inclusion on retaining walls shall be placed at locations approved by the District Landscape Architect and shall be verified at the time of shop drawing review and approval. In addition, the inset area shall receive a concrete paint finish in accordance with Item 427. The Contractor shall provide color samples to the District Landscape Architect for approval. The painted finish of the Texas Emblem shall then receive a Type III anti-graffiti coating similar to the retaining wall formliner area. Painting of the inset will not be paid directly, but shall be subsidiary to Item 423.

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All wall foundations shall be proof-rolled and treated in accordance with 423.4(2). All proof rolling will be considered subsidiary to Item 423.

A list of approved MSE panel systems can be found at

[http://www.txdot.gov/business/contractors\\_consultants/bridge/mse\\_wall.htm](http://www.txdot.gov/business/contractors_consultants/bridge/mse_wall.htm)

### **ITEM 427: SURFACE FINISHES FOR CONCRETE**

Provide all culverts with a Surface Area I, rub finish.

All emblems (star, shape of Texas, etc.) shall be painted with opaque sealer. The color will be determined by the District Landscape Architect.

Provide all bridge and retaining wall concrete structures with the following special finishes:

- Retaining wall panels: Formliner finish.
- Precast or cast-in-place retaining wall coping: White cement with rub finish or opaque sealer coating with anti-graffiti coating having special application requirements.
- Railing and concrete traffic barrier: White cement with rub finish or opaque sealer coating with anti-graffiti coating having special application requirements.
- Caps and Columns: Formliner finish and Off-the-form finish. See plans for details.
- All other cast-in-place concrete listed under Surface Area I: Rub finish.
- Opaque sealer coating with Anti-Graffiti Coating is allowed in lieu of white cement, as long as it is installed in accordance with the "Special Application Requirements" listed below.

Apply an Ordinary Surface Finish to elements not listed in "Surface Area I."

Special Surface Finishes listed above will not be paid directly and are considered subsidiary to the various items.

Off-the-Form Surface Finish is supplemented by the following and shall apply to Readily-Visible Concrete Surfaces, only:

- Off-the-Form Finish shall have a pleasing appearance with minimal color and texture variations and minimal surface defects when observed at a distance of approximately 20 feet. Provide this finish by using non-staining, non-porous, high-quality forming materials as specified under Item 427.3.E. Use the same type of forming materials for like elements for the entire structure.
- Engineer shall determine acceptability of finished surfaces.
- Refurbish or replace forms if they discolor or cause a variation from the finish established in the mock-up, as determined by the Engineer.

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- Avoid “pinking” of concrete due to reddening of young overlaid plywood. Treat plywood or use a release agent that prevents pinking. If pinking occurs, clean the green concrete surface as soon as the forms are removed. If pinking is still not removed by washing or does not disappear with time, clean the plywood after submitting a written cleaning procedure approved by the Engineer.
- Use similar curing times for a particular type of element (e.g. bent, rail), if possible. Do not allow more than 3 days difference in curing duration for form curing, wet mat curing, or a combination of the two.
- Once form removal commences on a particular continuous surface, continue work uninterrupted until all forms are removed to prevent discoloration due to differing form-curing times.
- For repaired and patched members: Perform required repairs as soon as forms are removed. For a uniform surface finish, Contractor shall apply an adhesive grout consisting of a high quality, non shrink sand grout. Remove the water from the mixture and replace it with latex or epoxy bonding agent. Apply coating on a moistened concrete surface and spray uniformly with an acoustic hopper. The Contractor shall provide a test area to be approved by the Engineer so ensure appearance, adhesion, and durability.
- Contractor shall provide a system for covering and/or protecting bent and abutment concrete and colored textured concrete from staining until vegetation is established. A product such as Vis-Queen plastic sheeting shall be used. This system shall be reviewed and approved by the Engineer prior to bridge construction. If for any reason the approved system fails to perform properly, the system will be rejected and a new system must be approved by the Engineer. Work and materials necessary for protecting concrete shall be considered subsidiary to Items 420 and 427.
- Drip pans shall be removed from visible sight as directed by the Engineer after the bridge deck(s) are completed.

When anti-graffiti coating is applied after another coating (paint, opaque sealer, etc.), it will be subsidiary. When anti-graffiti coating is placed on un-coated surfaces, it will be paid directly. See Item 740 General Notes for more detail.

No painting of structures shall be done between November 1 and April 1, unless otherwise authorized by the Engineer. In addition, apply paint when air temperature is 50 degrees and rising and no greater than 95 degrees. Wait a minimum of 24 hours after surface has been wetted from cleaning or rain to allow sufficient drying of surface.

Opaque sealer coating with anti-graffiti coating is allowed in lieu of white cement, as long as it is placed in accordance with the “Special Application Requirements” listed below.

**COUNTY: CORYELL, ETC.****HIGHWAY: US 190****Special Application Requirements (for Opaque Sealer Used in Lieu of White Cement)**

The below requirements are supplemental to Item 427. All requirements specified and under Item 427 to achieve the required finish are not paid directly, but are subsidiary to the pertinent concrete structure items. These requirements apply only to opaque sealer used in lieu of white cement.

- Cure new concrete surfaces for 60-90 days prior to application of coating;
- Use an approved UV disappearing curing compound rather than the standard approved curing compounds;
- Perform PH tests as directed by the Engineer and in accordance with standards from the Society of Protective Coatings until a PH of 9 or lower is achieved to insure the concrete is sufficiently cured so as to not reject the coating materials;
- Sandblast concrete surfaces to produce a Level 3 surface texture measured by using the International Concrete Restoration Institute (ICRI) standard gauge CSP-3 rubber chart that depicts the level of sandblasting achieved;
- Water Blast concrete surfaces at 3000 psi to remove all dust and debris;
- Wait a minimum of 24 hours after sand and water blast cleaning to allow thorough drying of prepared concrete surface;
- Apply a water repellant concrete sealer containing 40% silane at 100 sq. ft. per gallon when air temperature is 40 degrees and rising and is no greater than 95 degrees;
- Wait a minimum of 12 hours to start opaque sealer application after concrete sealer application;
- Color shall be Sherwin Williams “Waco White”;
- Apply two coats of opaque sealer for a total maximum application rate of 200 sq. ft. per gallon when air temperature is 50 degrees and rising and is no greater than 95 degrees;
- Apply Anti - Graffiti Coating Type II (Permanent) after opaque sealer coating has thoroughly dried. Follow requirements specified by Item 740 as well as manufacturer’s recommendations for additional application requirements.

**ITEM 428: CONCRETE SURFACE TREATMENT**

Provide a Class II surface treatment to the upper surface of bridge slab and bridge sidewalks.

**ITEM 430: EXTENDING CONCRETE STRUCTURES**

Do not remove any rail, curb, or wings until temporary barrier is completed on that side of the structure. Complete widening of structures on one side and open that side to traffic before temporary barrier is installed on the other side.



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**ITEM 432: RIPRAP**

**ITEM 529: CONCRETE CURB, GUTTER AND COMBINED CURB AND GUTTER**

Blast clean all concrete curb, curb and gutter, and riprap in accordance with Item 427 as part of the final cleanup and acceptance process. Other methods may be approved to obtain a uniform clean appearance, free of marks, stains, etc., at the time of final acceptance.

**ITEM 432: RIPRAP**

Locations and quantities may be varied as directed by the Engineer to accommodate field conditions.

Weep holes and granular material, are required and locations shall be determined by the Engineer prior to placement of concrete riprap at bridge abutments.

The Sodium Sulfate Soundness requirement for material used in rock riprap is waived for this project.

**ITEM 450: RAILING**

See Item 427 in General Notes for Surface Finish of railing.

Blast clean all railing in accordance with Item 427 prior to final acceptance of the project. This work will be considered subsidiary to Item 450.

Insure slip formed railing and cast-in-place railing will be uniform in color and texture.

Clean all holes drilled for adhesive anchors for the retrofit traffic rail using a steel wire brush mounted on a rotary drill in addition to other cleaning methods (such as cleaning by using compressed air) to remove dust or other material coating the drilled hole. Cleaning by compressed air, only, will not be sufficient. It will be the responsibility of the Contractor to properly clean and place anchors to ensure proper design pullout requirements. Actual pullout tensile tests for these anchors will not be required; however, anchors placed, which do not meet design requirements in the opinion of the Engineer, shall be replaced at the Contractor's expense.

**Details to Paint Galvanized Steel (Metal Rail)**

The surface to be painted shall be washed with a biodegradable alkaline detergent to remove all oil, grease, flux, white rust, dirt, and any other contaminants. This surface shall be thoroughly rinsed with clean water to remove any remaining detergent. Any remaining oily contamination shall be removed with clean solvent.

The surface to be painted shall be lightly sweep-blasted to show an etched pattern on the entire surface. Do not use steel or iron grit or shot. Do not damage the galvanizing such that the galvanizing is fractured, chipped, or removed in layers. Other methods of etching with power tools may be used as approved by the Engineer. The primer must be applied within 24 hours of cleaning or the surface shall be cleaned again prior to painting.

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Apply 50 micrometers (2.0 mils) minimum dry film thickness of Epoxy Intermediate coating and 50 micrometers (2.0 mils) minimum dry film thickness of Acrylic-cured Aliphatic Polyurethane Appearance coating. The Epoxy Intermediate coating shall be recommended by the manufacturer as acceptable for use on galvanized steel. The Epoxy Intermediate coating and the Urethane Appearance coating shall meet TxDOT Material Specification DMS-8101, "High Corrosion Environment Structural Paints." Appearance coating color shall be chosen from the Federal Standard Color Fan Deck by the District Landscape Architect. Submit a minimum of three color samples for approval prior to ordering paint materials.

The appearance coating shall dry to form a smooth, continuous, tightly adhering film of uniform thickness and appearance, free of sags, runs, pinholes, holidays, overspray, and any other discontinuities. The appearance coating shall have a uniform appearance within all portions of the painted piece and all related pieces and components of the job.

**ITEM 462: CONCRETE BOX CULVERTS AND STORM DRAINS**

Joints between precast concrete box culverts shall be preformed flexible joint sealants as described in Item 464.3C, "Jointing."

Reshape embankment side slopes, provide embankment as required, and add topsoil to achieve a smooth uniform finish around the installation of the safety end treatments and culvert extensions as directed by the Engineer. Finishing and reshaping work will be subsidiary to Items 132, 162, and 467.

**ITEM 464: REINFORCED CONCRETE PIPE**

Install all reinforced concrete pipe on this project using preformed flexible joint sealant.

**ITEM 467: SAFETY END TREATMENT**

Welds are not allowed to splice safety pipe runners. A safety pipe runner shall be one continuous pipe.

**ITEM 502: BARRICADES, SIGNS, AND TRAFFIC HANDLING**

A meeting between the Contractor and Engineer to discuss upcoming changes in construction phasing and traffic switches is required at least 14 days prior to the phase change. Items to be discussed at this meeting include temporary signing, traffic control, pavement markings, the processes necessary for the phase change, and subcontractor scheduling.

All signs, delineators, object markers, and route markers shall be in place prior to opening each phase of construction to traffic.

When a culvert extension, inlet construction, and/or safety end treatment and open excavation, etc. is within 30 feet of a travel lane, delineate these areas as shown on the BC Standard sheets. In addition a 4-foot high plastic construction fence shall be required at or around any structure or obstruction that would be a hazard to pedestrians, unless otherwise approved by the Engineer.

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This fence shall be erected in a manner acceptable to the Engineer. Construction fencing will not be paid separately, but will be considered subsidiary to Item 502.

During construction, erect and maintain accurate clearance signs (W12-2 or W12-3), in accordance with the *Texas Manual on Uniform Traffic Control Devices* on all underpass structures. The mounting method for the temporary clearance signs is subject to approval of the Engineer. Temporary clearance signs will not be paid directly, but will be considered subsidiary to the various bid items.

Law enforcement assistance will be required for this project and is expected to be required for major traffic control changes and lane closures on US 190. Coordinate with local law enforcement and arrange for law enforcement as directed or agreed by the Engineer. These peace officers and vehicles will be paid by Force Account. Complete the weekly tracking form provided by the Department and submit invoices that agree with the tracking form for payment at the end of each month approved services were provided.

Provide full-time off-duty uniformed certified peace officers in officially marked vehicles with highly visible light bars and or strobe lights, as part of traffic control operations on US 190. The peace officers shall be able to show proof of certification by the Texas Commission on Law Enforcement Officer Standards. It is intended that two marked vehicles be utilized for each lane closure, with one vehicle positioned near the beginning of the lane taper and the other vehicle proceed moving to position itself to be in advance of the traffic queue to sufficiently warn approach vehicles of slowed or stopped traffic.

The Contractor Responsible Person (CRP) shall be certified by TEEX, ATSSA, the National Safety Council, or other approved organization. Certifications shall be submitted to the Engineer at the preconstruction meeting.

The Contractor Responsible Person (CRP) for Work Zone Traffic Controls shall inspect and insure any deficiencies are corrected each and every day throughout the duration of this Contract. Any misaligned or damaged traffic control devices shall be repaired as soon as practical after deficiency is discovered.

In addition to providing a Contractor's Responsible Person and a phone number for emergency contact, have an employee(s) available to respond on the project for emergencies and for taking corrective measures within 30 minutes.

Place advisory speed plates (CW13-1) in accordance with the TMUTCD and as directed by the Engineer. Signs (CW13-1) shall not be used with any signs other than a warning sign, nor shall it be used alone. Sign mounting height shall be seven (7) feet minimum to the bottom of the speed plate.

Cover work zone speed limit signs with a commercial grade sign cover or remove signs when work activities allow as directed by the Engineer. Turning signs from view, laying signs over or

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down will not be allowed. The Contractor will coordinate changes in speed limit signs with law enforcement.

Any work being done above travel lanes on the overhead sign bridge will require the lanes to be closed for traffic safety.

The **shadow vehicle** with truck-mounted attenuator (TMA) will not be optional but will be required as shown on the appropriate Traffic Control Plan sheets. Truck-mounted attenuators shall meet the requirements of the Compliant Work Zone Traffic Control Device List. The use of truck-mounted attenuators shall not be paid directly, but shall be considered subsidiary to Item 502.

Open the pavement to traffic each night. Remove all material stockpiles, equipment left overnight, or any obstruction within 30 feet of a travelway or clearly mark by warning lights and barricades, as approved by the Engineer.

Arrange construction operations to prevent the hauling of materials through the completed pavement sections, unless otherwise approved by the Engineer.

Unless otherwise shown on plans, where there is excavation adjacent to the pavement edge, provide adequate warning signs, vertical panels, drums and reflectors at the pavement edge, as directed by the Engineer. Treat pavement drop-offs created by ACP operations in a similar manner and in accordance with the details shown in the plans.

When excavation is required next to a travel lane carrying traffic, widening is not completed by the end of the day's operation, and unless otherwise permitted in the plans, place sufficient backfill against the edge of the travel lane in order to provide a 3:1 slope. The backfill used shall be durable crushed stone type of flexible base or other materials approved by the Engineer. When work is resumed on this excavated area this backfill material shall be incorporated into the road work or disposed as approved by the Engineer. Materials and labor for this work will not be paid directly, but will be subsidiary to the various bid items.

Provide a pilot vehicle for this Contract during one-lane closure operation on two lane roadways.

Do not perform base widening on both sides of the roadway simultaneously, unless approved by the Engineer.

Prior to beginning work, the Contractor and Engineer shall agree on the allowable length of lane closure.

Place Type III barricades and road closed signs as shown on BC Standard sheets across the closed roadway or the new location at each road, street and/or closed bridge and along the closed roadway or new location at 1/2-mile intervals.

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When operations require a sidewalk closure, use traffic control devices controlling pedestrian flows as necessary to route pedestrians around the closed sidewalk.

Equip all construction equipment involved in roadway work with a permanently mounted warning light with amber lens as approved by the Engineer.

For nighttime flagging operations, each flagger station shall be lighted with portable light plants using "balloon-type" fixtures approved by the Engineer. The flagger shall wear Class 3 reflective garments. Lights shall be positioned as to not blind motorists.

**ITEM 504: FACILITIES FOR FIELD OFFICE AND LABORATORY**

For this project, furnish one field office Type C Structure.

The field office structure(s) shall be for the sole use of TxDOT employees, unless otherwise directed by the Engineer. Any hazardous materials stored or utilized in the structures shall be with the approval of the Engineer; any unauthorized hazardous materials in the structure when it arrives at the site shall be removed by the Contractor or his agents before work begins and TxDOT employees utilize the facility.

The field office structure shall be furnished prior to the beginning of work. In addition to the other requirements, a minimum of three desks, six chairs, one file cabinet, and two equipment storage closets shall be provided. Each closet shall provide a minimum of 3 feet by 3 feet of floor space or equivalent and shall have provisions for locking securely.

Provide a broadband Internet connection with a minimum speed of 10 Mbps download and 768 kbps upload, unless otherwise approved. Provide equipment for Wi-Fi connections to the Internet for multiple computers. This will not be paid directly, but will be considered subsidiary to various bid items.

Provide a structure (beam house) for use as a curing location, tank room and test area for concrete beams and cylinders made for this project. The Contractor must supply all of the curing tanks and adequate space for storage. The structure shall include a water faucet.

Furnish for the Engineer's exclusive use a laboratory meeting the specified Type D Structure. The building shall be located at the Contractor's hot-mix plant site and be separate from the Contractor's laboratory.

The parking lot shall be a minimum of 1600 square feet with an all-weather surface and enclosed by a chain link fence with at least one vehicle gate.

Furnish water fountain or bottled water fountain able to supply cold water. Bottled water shall be provided by the Contractor.

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The use of space heaters for the purpose of heating the structure is unacceptable. The building must be structurally sound and pose no safety hazards. The laboratory must meet all the above requirements within two (2) weeks prior to beginning of work.

**ITEM 506: TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS**

No soil disturbing activities shall begin on any section of TxDOT ROW without adequate sedimentation controls first being installed and functioning at adjacent drainage outfalls. Begin and continuously prosecute the repairs, additions, and maintenance of erosion and sedimentation control devices within seven days after the Contractor receives each Form 2118, Field Inspection and Maintenance Report, from the Engineer. Failure of the Contractor to fulfill either of the above requirements places TxDOT in potential non-compliance with permit requirements and may result in withholding estimates or stopping work or both until all environmental permit requirements are fulfilled.

Furnish one SW3P permit posting sign and sign support as detailed in the plans. Install this sign in a location selected by the Engineer. The sign and support should be removed upon completion of the project and is the property of the Contractor. The purchase of the sign and support, installation, relocation(s) if determined necessary by the Engineer and removal at project end shall be subsidiary to Item 506.

The temporary diversion berms referenced in Article 5.12, "Run-on/Run-off and Leachate Control Measures" of the GWEOP (Authorization Request to Disturb Final Cover Over a Closed Municipal Solid Waste Landfill) will be paid for under Item 506-2048, (Eros & Sedm Cont) Dike with Swale. Construct dikes and swales in accordance to the EC(4) - 93 Standard in the plans. Dimensions may be altered in the field by the Engineer.

Contractor shall reserve sufficient overburden material to construct temporary containment berms. The temporary containment berms will be considered subsidiary to Item 506.

Construct leachate drainage line before landfill excavation begins to handle disposal of the leachate from excavation area, unless otherwise approved by the Engineer.

**ITEM 508: CONSTRUCTING DETOURS**

Any widening that is not protected by a positive barrier and any drop-offs greater than 2 inches, must be sloped at no steeper than a 3:1 slope at the end of each work day.

When no longer in service, remove all detours by planing. The resulting RAP shall be stockpiled as described in the Item 305 notes. This work shall be subsidiary to Item 508.

**ITEMS 512: PORTABLE CONCRETE TRAFFIC BARRIER**

The portable concrete traffic barrier will be furnished by the Department. These units are at the stockpile site located at the interchange of US 190 at Fort Hood Main Gate. Upon completion of

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the project, these units will be delivered and stockpiled at the above-named location or locations within a 25-mile haul distance as directed by the Engineer. The Contractor will furnish equipment necessary to load and unload the units at the stockpile locations.

Provide the rebar cages for connecting the portable concrete traffic barrier.

All hardware shall become the property of the Department and shall be returned to the Texas Department of Transportation stockpile site where the barrier is stockpiled. Place hardware in 55 gallon barrels with holes in bottom to allow drainage.

The units shall be returned in the same condition as when received.

Delineate barriers with a minimum of 2, Class A, reflectors per section. Reflectors mounted on the top and the traffic side of the barrier shall match the color of the nearest edgeline. These reflectors will not be paid directly, but will be considered subsidiary to the various bid items.

**ITEM 529: CONCRETE CURB, GUTTER AND COMBINED CURB AND GUTTER**

Attach machine laid curb to pavement with a two-compound epoxy adhesive. Epoxy shall be applied to that area of pavement under the machine laid curb and must be a minimum of 6 inches in width and 0.2 inches (20 mils) thick. The epoxy shall be applied uniformly by some method approved by the Engineer.

**ITEM 540: METAL BEAM GUARD FENCE**

In the event a guard post falls on top of an inlet, cut the post to the proper length and bolt it to the inlet top as shown on the plans.

The blockouts used on the metal beam guard fence will be made of a composite material from a source on the Department-approved list of suppliers. The use of wooden blockouts will not be allowed.

**ITEM 542: REMOVING METAL BEAM GUARD FENCE****ITEM 544: GUARDRAIL END TREATMENTS**

W-beam elements and steel posts deemed salvageable by the Engineer will remain the property of the Department and shall be returned to the TxDOT Maintenance yard at Gatesville Area Office. All other guard fence, and SGTs deemed non-salvageable will become the property of the Contractor.

**ITEM 544: GUARDRAIL END TREATMENTS**

The blockouts used on the single guardrail terminals will be made of a composite material from a source on the Department-approved list of suppliers. The use of wooden blockouts will not be allowed.

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**ITEM 545: CRASH CUSHION ATTENUATORS**

The Crash Cushion Attenuators will be located at Department stockpile locations to be determined within 75 miles of the project site. These units may be REACT or TRACC systems. Provide all necessary hardware for proper installation of these units (subsidiary).

Object markers (OM-3L and OM-3R) as shown on the Standards “BC(7)-07” and “D&OM(VIA)-04” shall be furnished by the Contractor for all Crash Cushion Attenuators and shall be subsidiary to this Item.

Upon completion of the project, all Crash Cushion Attenuators shall be returned to the TxDOT yard at the interchange of US 190 at Fort Hood Main Gate or other locations within 25 miles of the project as directed by the Engineer. The Contractor will furnish equipment necessary to load and unload the units at the stockpile locations. Stockpile the units as directed by the Engineer.

All hardware shall become the property of the Department and shall be returned to the TxDOT Maintenance yard in Bellmead on US 84. Place hardware in a separate crate for each Crash Cushion Attenuator, as directed by the Engineer.

Crash Cushion Attenuators that are not reusable shall become property of the Contractor and shall not be returned to TxDOT stockpile location. The Engineer will make the determination of what is reusable or not reusable.

Replace, at the Contractor’s own expense, units, or hardware that is damaged by the Contractor’s own operations.

The two permanent Crash Cushion Attenuators will be furnished and installed by the Contractor. Supply and construct REACT 350 (N), TRACC (N), or SMTC (N) for a design speed of 70 mph.

**ITEM 550: CHAIN LINK FENCE**

Opaque screening for the landfill security fence will be as shown in the plans and of a material approved by the Engineer.

**ITEM 556: PIPE UNDERDRAIN**

Pipe Underdrain Type 9 will be 6-in. HDPE (SDR 17) used as part of the leachate collection system shown in the plans. The filter material shall meet the requirements as shown in the plans. The filter fabric as shown in the plans shall meet DMS-6200, “Filter Fabric,” Type 2.

Trench Excavation for this Item will be paid for under Item 402.

**ITEM 560: MAILBOX ASSEMBLIES**

Mailboxes will be kept in a position accessible to the carrier’s vehicle along the travelway, except when performance of grading operations necessitates the moving of mailboxes. When



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grading operations necessitate the moving of mailboxes, the Contractor shall place them at a nearby location, which will be accessible to the carrier's vehicle. Mailboxes will be returned to a position accessible to the carrier's vehicle along the travelway when grading operations are not in progress. This work will not be paid directly, but will be subsidiary to Item 560.

**ITEM 585: RIDE QUALITY FOR PAVEMENT SURFACES**

The ride quality for the pavement surface shall be Surface Test Type B along the finished riding surface of all travel lanes, including ramps, as defined below:

Schedule 1 will be used for *flexible* pavement surfaces.

Schedule 2 will be used for *concrete* pavement surfaces.

All other roads shall be Surface Test Type A.

The Contractor shall take care to ensure satisfactory profile results in the intermediate paving layers (mixture) to eliminate corrective action for excessive deviations in the final surface layers.

Milling will not be allowed as a corrective action for excessive deviations in the surface layer of hot-mix.

**ITEM 610: ROADWAY ILLUMINATION ASSEMBLIES**

The Contractor's attention is called to the fact that conduit and junction boxes for illumination or other purposes may be required in the construction of the bridge slabs, columns, caps or other parts of the bridge structure(s). Refer to the Bridge and Illumination Layouts for details.

Fabricate steel roadway illumination poles in accordance with TxDOT Standards RIP-07 (Roadway Illumination Poles – 2007). Poles fabricated according to RIP-07 require no shop drawings.

Alternate design to RIP-07 or the use of aluminum to fabricate poles will require the submission of shop drawings, electronically.

For instructions on submitting shop drawings electronically, go to TxDOT homepage/Business with TxDOT/Contractors and Consultants/Bridge Information/Shop Drawings:

[ftp://ftp.dot.state.tx.us/pub/txdot-info/library/pubs/bus/bridge/e\\_submit\\_guide.pdf](ftp://ftp.dot.state.tx.us/pub/txdot-info/library/pubs/bus/bridge/e_submit_guide.pdf)

File is titled: "Guide to Electronic Shop Drawing Submittal."

**ITEM 618: CONDUIT**

The locations of conduit as shown are for diagrammatic purposes only and may be varied to meet local conditions, subject to approval.

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When backfilling bore pits, ensure that the conduit does not become damaged during installation or due to any settling of the backfill material. Compact with select backfill in three equal lifts to the bottom of the conduit or if sand is used, place to a point 2 inches above the conduit. Backfill density shall be equal to the existing soil. Be careful to prevent any material from entering the conduit.

Backfill all open trenches before the end of the workday and do not leave any trench open overnight.

Casing will be incidental to the conduit, if it is required for placing a bored conduit.

Remove all abandoned conductor and conduit to 1-foot below ground level. This work will not be paid directly, but will be subsidiary to the pertinent Items.

#### **ITEM 620: ELECTRICAL CONDUCTORS**

Place the loop detector, communications, and/or coaxial cables in a separate conduit from the electrical conductors with 120, 240, or 440 volts.

Any damage to any wire or any cable is cause for immediate rejection of the entire cable being tested. Remove and replace the entire cable at the Contractor's expense.

Electrical certification for this project will be as per Item 7 of the current Texas Standard Specifications and Special Provision to Item 7.

For both transformer-type illumination poles and traffic signal poles with illumination, provide double-pole breakaway fuse holder from manufacturers as shown on the Texas Department of Transportation (TxDOT) *Material Producer List*, category is "Roadway Illumination and Electrical Supplies" <ftp://ftp.dot.state.tx.us/pub/txdot-info/cmd/mpl/riaes.pdf>. Fuse holder is shown on list under Items 610 and 620.

Provide 10 amp time delay fuses.

#### **ITEMS 624: GROUND BOXES**

Ground box locations shown on the plans are approximate locations. Actual locations are as directed.

#### **ITEM 628: ELECTRICAL SERVICES**

Contact the Electric Utility Company to make all necessary arrangements to provide electrical service shown on the plans in accordance with Article 628.5 and the Electrical Details, except that TxDOT will make application to the Electric Utility Company for service (See note below).

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**Note:**

Before fabricating the electrical service, contact the Waco District Traffic Signal Service Supervisor (Phone (254) 867-2807), to make application (billing arrangements) for service with the Electric Utility Company.

Furnish and install a lock on all electrical services. The lock is to be a Master Lock<sup>®</sup> number 175LH (four-digit combination).

**ITEM 636 ALUMINUM SIGNS**

Verify all dimensions at the actual proposed sign location in order to maintain dimensions as shown on the Sign Mounting Details.

The sign locations as shown on the plans are for diagrammatic purposes and show the approximate location of the signs. Stake the location of the new signs to be approved by the Area Engineer.

**ITEM 644: SMALL ROADSIDE SIGN SUPPORTS AND ASSEMBLIES**

Measure all dimensions in the field at the actual locations.

Place signs in accordance with lateral and vertical clearances as show in the Sign Mounting Details for Small Roadside Signs and in the *Sign Crew Field Book*.

Sign placement heights are a minimum of seven (7) feet and a maximum of seven feet six inches (7 ft. – 6 in.) to the bottom of the sign or plaque. Mounting heights are measured as follows:

1. When the base of the sign is below the edge of travel lane, the sign height is measured from the edge of the travel lane to the bottom of the sign.
2. When the base of the sign is above the edge of the travel lane, the sign height is measured from natural ground to the bottom of the sign.
3. When a supplemental plaque or secondary sign is used, the sign height is measured to the bottom of the supplemental plaque or secondary sign.
4. When a sign has two or more posts, all posts must be a minimum height above natural ground to the bottom of the sign. The sign also must be a minimum height above the edge of the travel lane.

Do not leave any sign foundation holes open overnight. Ensure all holes drilled are at least the minimum required depth with no loose material remaining in the hole.

Stake proposed sign locations and receive approval before installation of sign foundations. Determine each post length after the stub has been placed.

Furnish and install a triangular slip base sign mount with the following features to allow easier installation and maintenance for those signs specified in the Summary of Small Signs. The

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housing should be designed so that it does not deform or damage the strength of the sign post. The housing should provide full contact with the circumference of the sign post in order to provide maximum support and stability to the sign post. The inside of the base sleeve should not be tapered so that the sign post will be completely supported inside the sleeve. The housing clamp bolts will only be for tightening the housing around the sign post so the bolts have not direct contact with the sign post. All mounting bolts are to be the same type and length so that only one set of bolts and one size wrench will be needed to install and maintain the mount. Housing is to be manufactured from steel without threads, and using threaded clamping bolts. Provide triangular slip base housing from manufacturers pre-qualified by the traffic Operations Division. Contact the Traffic Operations Division Engineering Section (512) 416-3118 for the list of pre-qualified manufacturers.

Concrete for sign foundations is designated as "Miscellaneous Concrete." It will be accepted based on a minimum 7-day flexural strength of 280 PSI. The slump is to be no greater than 4 inches.

Use trowel to finish all foundations for neat appearance. Remove all excess material.

Expanded foam foundations are not permitted.

Tighten the slip base and the locking collar as shown on the Sign Mounting Details for Small Signs Standard. Do not tighten bolts greater than 80 foot –pounds, except to clean threads. Over-torque bolts to clean the thread of any galvanization that might cause an incorrect torque reading. Then loosen the nuts and tighten to the required torque of 80 foot-pounds. Tighten bolts incrementally in a sequential manner such that the load is applied uniformly to the locking collar.

Cut the bottom of all posts level.

For sign types which design details are not show on these plans, fabricate according to the *Standard Highway Sign Design for Texas*.

Removed material that is deemed salvageable (signs and posts) will be the property of TxDOT. Deliver salvageable material to the TxDOT yard located within 25 miles of the project as directed by the Engineer. Remove unsalvageable material from the project.

Maintain existing roadside signs within this project's limits during this Contract. In order to accommodate the grading or other operations, relocate these signs and assemblies onto temporary supports adjacent to the ROW line in accordance with the TMUTCD and as directed by the Engineer. This work will be paid as "Relocate Small Roadside Sign Supports and Assemblies." Moving the temporary supports for accommodating work and relocating for subsequent phases will not be paid directly. The existing sign assemblies requiring relocation to a temporary support must be approved by the Engineer.

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**ITEM 650: OVERHEAD SIGN SUPPORTS**

Lengths of trusses, tower heights, and posts shown in the summaries are for bidding purposes only. Verify these dimensions upon substantial completion of the subgrade section at the location shown on the plans or as relocated by the Engineer. Notify the Engineer, prior to shop drawing production, concerning any discrepancies found, which may reduce established ground clearance requirements.

Provide information for alternate design conforming to the requirements of Item 5, "Control of the Work." Furnish shop drawings for this Item indicating the weight of structure and all equipment supported by the structure to verify the design of the structure.

**ITEM 656: FOUNDATIONS FOR TRAFFIC CONTROL DEVICES**

Foundations for traffic signal controllers, roadside flashing beacons, and pedestal pole assemblies are subsidiary to Items 680, 685, and 687, respectively. Pedestal foundation will be modified from ED 8-(03) to extend 2 feet above and 2 feet below the ground.

Locations shown on the plans are for diagrammatic purposes only and may be varied to meet local conditions, subject to approval. Stake these locations and have them approved before installation of foundations.

For the signal controllers furnished by TxDOT, anchor bolts and bolt patterns for the controller foundations will be supplied.

Consult with the Engineer to ensure proper the location and orientation of the signal controller before construction.

Backfill all open foundation holes before the end of the workday and do not leave any holes open overnight.

**ITEM 658: DELINEATOR AND OBJECT MARKER ASSEMBLIES**

The delineator assembly Type C Class A (D-SW) and (D-SY) are to be single or double delineators as detailed in the plans (Class I) attached to a flat, plastic bracket to facilitate the mounting of the delineator on top of the bridge rail at the locations shown on the plans. Submit a sample for approval before ordering materials.

For all delineators and object markers, when a FLX (flexible post) is specified, furnish a tubular post minimum of 2 inches diameter with a flat surface at least 3 inches wide and 15 inches long for delineator mounting meeting the requirements of DMS-4400. Submit one assembly or a material cut sheet to the Engineer for approval prior to installation.

**ITEM 662: WORK ZONE PAVEMENT MARKINGS**

Lane lines for transitions and detours will consist of raised pavement markers as shown for solid lines on the Barricade and Construction Standards, Work Zone Pavement Marking Details.

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Paint and beads may be used for non-removable pavement markings.

**ITEM 666: REFLECTORIZED PAVEMENT MARKINGS**

Before the application of pavement markings, sufficiently clean pavement surfaces to remove all forms of contamination and loose materials, in accordance with Item 678, "Pavement Surface Preparation for Markings." This work will not be paid directly, but will be subsidiary to Item 666 "Reflectorized Pavement Markings."

Make all stop lines twenty-four (24) inches wide.

Pay Item for REFL PAV MRK TY I (W) (8") (BRK) will be used for intersection turning lane channelizing markings as shown in the latest *Texas Manual on Uniform Traffic Control Devices*, Section 3B.08, figure 3B-11c.

Remove markings at own expense that are not in alignment or sequence, as shown on the Standard sheets or as stated in the Specifications, or do not meet the specification and/or approval of the Project Manager. Removal shall be in accordance with Item 677, "Eliminating Existing Pavement Markings and Markers," except for measurement and payment.

**ITEM 668: PREFABRICATED PAVEMENT MARKINGS**

Use Type C prefabricated pavement markings (TxDOT Spec DMS-8240) for all Word, Arrow, and RR Crossing markings.

**ITEM 672: RAISED PAVEMENT MARKINGS**

Place TYPE II-C-R and TYPE I-C markers for lane lines on 80 feet centers. In no-passing zones, place TYPE I-C markers on 40 feet centers as detailed in the PM Standards.

*Paragraph deleted.*

Before the application of pavement markers, sufficiently clean pavement surfaces to remove all forms of contamination and loose materials, in accordance with Item 678, "Pavement Surface Preparation for Markings." This work will not be paid directly, but will be subsidiary to Item 672, "Raised Pavement Markers."

Remove at own expense markings placed that are not in alignment or sequence, as shown on the Standard sheets, as stated in the Specifications, or do not meet the Specification and approval of the Project Manager. Removal shall be in accordance with Item 677, "Eliminating Existing Pavement Markings and Markers," except for measurement and payment.

Mount all raised pavement markers placed on concrete surfaces using an epoxy adhesive, in accordance with Article 672.3.

All traffic buttons used for intersection radii shall be 6-in. diameter.

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**ITEM 677: ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS**

Pay item for eliminating existing raised pavement markers is for operations of removal, only, with no marker replacement.

**ITEM 680: INSTALLATION OF HIGHWAY TRAFFIC SIGNALS**

References to manufacturer's trade name or catalog numbers are for the purpose of identification only and like materials of other manufacturers can be furnished provided they are of equal quality and comply with specifications for this project and are approved.

Accomplish the erection of poles and luminaires located near any overhead electrical lines using established industry and utility safety practices. Consult with the appropriate utility company before beginning such work.

Furnish overhead extruded aluminum (Type O), with the background and copy fabricated with prismatic reflective sheeting for the street name signs mounted on traffic signal poles.

Furnish and install aluminum signs and brackets to be mounted on traffic signal pole mast arm assemblies with "Option C" bracket assemblies for signs as described on the Traffic Signal Support Structures Details. Mount signs horizontal as shown on the plans. This work will not be paid directly, but will be subsidiary to Item 680, "Installation of Highway Traffic Signals."

TxDOT will furnish traffic signal controller assemblies, and cabinets. Pick up these units at the District Traffic Shop located at 100 South Loop Drive in Waco. Notify the District Traffic Signal Shop seven (7) days prior to picking up the units.

**ITEM 682: VEHICLE AND PEDESTRAIN SIGNAL HEADS**

Provide and install light emitting diode (LED) traffic signal lamp units in all vehicle and pedestrian signal head sections.

Provide new signal head housings with yellow aluminum housings and back plates.

Cover all signal heads installed, but not in operation, in an approved manner from the time of installation until the signal is placed in operation. This will not be paid directly, but will be subsidiary to Item 682, "Vehicle and Pedestrian Signal Heads."

Provide and install standard detachable tunnel visors on all signal heads. Provide and install all necessary mounting hardware to insure proper mounting of all signal heads. The mounting hardware and attachments will be new (no reuse of old existing attachment hardware) and the same color as the signal head housings. Use signal heads made of aluminum with 12 inch LED indications and aluminum back plates.

Ensure that each signal head has a minimum vertical clearance of 18.5 feet and a maximum vertical clearance of 19 feet between the bottom edge of the signal head and the surface of the roadway.

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**ITEM 686: TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL)**

Payment for traffic signal pole foundations is per Item 416, "Drill Shaft Foundations." Furnish and use a circular steel anchor bolt templates as shown on the Traffic Signal Pole Foundation Details for all signal pole foundations on this project.

**ITEM 730: ROADSIDE MOWING**

Throughout the course of the project, when in the opinion of the Engineer, tall grass and weeds affect the safety of the public by restricting visibility, interfere with normal traffic flow, or appear unsightly, the Contractor shall be required to mow same.

**ITEM 738: CLEANING AND SWEEPING HIGHWAYS**

For sweeping operations, a vacuum pickup type broom shall be utilized.

Regular sweeping of dirt or mud due to construction operations from the travelways will not be paid directly, but will be subsidiary to the various bid items.

**ITEM 740: GRAFFITI REMOVAL AND ANTI-GRAFFITI COATING**

Anti-graffiti coating shall be applied to all concrete and riprap surfaces of the bridge structure and retaining wall exposed to the view of roadway traffic as directed by the Engineer.

When anti-graffiti coating is applied after another coating (paint, opaque sealer, etc.), it will be considered subsidiary. When anti-graffiti coating is placed on uncoated surfaces, it will be paid directly.

Anti-graffiti coating shall be Type III Permanent, Water Cleanable, except that Type II will be used for surfaces applied with an Opaque Sealer, see General Notes Item 427 for more details including measurement and payment exception. The color of coating shall be clear or translucent as approved by the District Landscape Architect.

**Anti-Graffiti Coating Type III-Permanent, Water Cleanable:**

- a) Type III Coatings allow removal of the graffiti with low-pressure water wash.
- b) The color must match Federal Standard 595B; color number 35630, unless otherwise shown in the plans. When the plans show another color, the color must match the color standard supplied by the Engineer. The plans may specify clear or translucent coating as a color.
- c) Pressure wash requirements must not exceed 500 psi.
- d) Coating must be washable with water at an ambient temperature of 50°F or higher.
- e) Coating must allow for a minimum of ten cycles of graffiti removal.
- f) Coating must be self-recoatable for the life of the coating.

The dry times of a 3-mils wet film of the coating must meet set-to-touch, 4-hour maximum and dry through, 24-hour maximum when tested at 77°F in accordance with ASTM D 1640.



**COUNTY: CORYELL, ETC.**

**HIGHWAY: US 190**

**ITEM 3224: DENSE-GRADED HOT-MIX ASPHALT (QC/QA)**

The Contractor shall provide a ticket writer during hot-mix operations.

RAP will be allowed in all types of mixes for Item 3224.

The RAP must be obtained from the top 2 inches of asphalt pavement on this project or from one of the approved State-owned stockpiles.

Locations and availability of the RAP at various Department-owned stockpiles can be obtained from the Engineer at the time of letting. RAP from Contractor-owned sources may be used if the RAP is fractionated. The coarse fraction of Contractor-owned RAP will not be allowed if it consists primarily of siliceous aggregates.

Hydrated lime shall be added to the hot-mix asphalt as an additive to improve quality of the mixture. The lime shall be added at a rate of 1.0% by weight of the total aggregate. The lime shall meet the requirements of Type A, hydrated lime, or Type B, commercial lime slurry, that meets the requirements of DMS-6350, "Lime and Lime Slurry." The lime shall be added to the fine aggregate, pugmill mixed, and stockpiled a minimum of 24 hours prior to introduction to mixing plant. Other methods of adding lime that produce comparable results and are acceptable to the Engineer may be considered. Lime shall not be paid directly, but will be considered as subsidiary to various bid items.

Evaluate the mixture proposed for use for moisture susceptibility in the mixture design and production stages by Test Method Tex-530-C, unless otherwise directed by the Engineer. Maximum stripping of 0% is required. If more than 0% stripping occurs, additional anti-stripping agent may be required.

The placement pay factors for shoulders placed separately from the travel lanes, shall be based on in-place air void determinations.

For this Contract, provide a continuous flow of material to the paver by means of a self-propelled material transfer vehicle (MTV). The (MTV) shall consist of a mobile hopper with a sufficient storage capacity and conveyor that will provide a non-stop placement of the hot-mix asphalt pavement for all courses on the traffic lanes and shoulders. The MTV shall have a system of augers or other approved systems to remix the mixture during the transfer process. The Engineer shall approve the MTV before use. This is required to minimize segregation and improve the ride quality.

If the Contractor elects to use the Pave-IR System, an MTV is not required.

Utilize a paver ski or mobile stringline at least 40 ft. long during placement of all hot-mix placed with an asphalt paver, unless otherwise approved by the Engineer.

Any truck bed releasing agent shall be approved by the Engineer.

**COUNTY: CORYELL, ETC.****HIGHWAY: US 190**

For Item 3224 mixes, target laboratory-molded density shall be 97.0% if the Texas Gyratory Compactor is used for design and production control. If using the Superpave Gyratory Compactor, the laboratory density shall be 96.0%.

For hot-mix overlay tie-ins to existing hot-mix pavement, provide a butt joint by milling a 2-in. to 0-in. taper over a minimum of 50 feet. This work will not be paid directly, but shall be considered subsidiary to the various bid items.

For tests specified by the Engineer, enter testing data in Department-provided electronic testing template spreadsheets. Submit electronically to the Engineer at the interval directed by the Engineer.

Target laboratory-molded density shall be 97.0% if the Texas Gyratory Compactor is used for design and production control.

**ITEM 5777 AND ITEM 5779:**

Trench Excavation Protection for work under these items is considered subsidiary.

**ITEM 6473: MULTIPOLYMER PAVEMENT MARKINGS**

For long line markings, provide glass beads that meet the requirements of Department Materials Specification D-9-8920, Glass Traffic Beads; however, the gradation and application will meet the following as a minimum:

- A.** Beads will be applied using a double drop application process. The first drop will be Type III or High Performance Type III beads applied at a minimum of 6 lbs/100 sf of pavement marking material.
- B.** Follow immediately with Type II beads applied at a minimum rate of 8 lbs/100 sf of pavement marking material.

The Engineer will verify the beginning and ending points of NO PASS zones prior to the striping the roadway centerline.

Before the application of pavement markings, sufficiently clean pavement surfaces to remove all forms of contamination and loose materials, in accordance with Item 678, "Pavement Surface Preparation for Markings." This work will not be paid directly, but will be subsidiary to Item 6473 "Multipolymer Pavement Markings."

Make all stop lines twenty-four (24) inches wide.

Pay Item for REFL PAV MRK TY I (W) (8") (BRK) will be used for intersection turning lane channelizing markings as shown in the latest *Texas Manual on Uniform Traffic Control Devices*, Section 3B.08, figure 3B-11c.

**COUNTY: CORYELL, ETC.**

**HIGHWAY: US 190**

Remove markings at own expense that are not in alignment or sequence, as shown on the Standard sheets, as stated in the Specifications, or do not meet the Specification and approval of the Project Manager. Removal shall be in accordance with Item 677, "Eliminating Existing Pavement Markings and Markers," except for measurement and payment.

**ITEM 6834: PORTABLE CHANGEABLE MESSAGE SIGN**

The portable changeable message sign(s) shall be used for all lane closures and freeway closures as shown on the Traffic Control Plan Standard sheets.

Furnish 4 portable changeable message signs for the duration of this project.

This project shall require "full matrix" type portable changeable message signs.

Supply portable changeable message sign(s) in accordance with the Traffic Control Plan Standard sheets and Section 6f.55 of the latest *Texas Manual on Uniform Traffic Control Devices*, Part VI.

CONTROL : 0231-19-002, ETC  
PROJECT : DMO 2011(997), ETC  
HIGHWAY : US 190  
COUNTY : CORYELL, ETC

TEXAS DEPARTMENT OF TRANSPORTATION

**GOVERNING SPECIFICATIONS AND SPECIAL PROVISIONS**

ALL SPECIFICATIONS AND SPECIAL PROVISIONS APPLICABLE TO THIS PROJECT  
ARE IDENTIFIED AS FOLLOWS:

STANDARD SPECIFICATIONS: ADOPTED BY THE TEXAS DEPARTMENT OF  
----- TRANSPORTATION JUNE 1, 2004.  
STANDARD SPECIFICATIONS ARE INCORPORATED  
INTO THE CONTRACT BY REFERENCE.

ITEMS 1 TO 9 INCL., GENERAL REQUIREMENTS AND COVENANTS  
ITEM 100 PREPARING RIGHT OF WAY (103)  
ITEM 104 REMOVING CONCRETE  
ITEM 110 EXCAVATION (132)  
ITEM 132 EMBANKMENT (100)(204)(210)(216)(400)  
ITEM 160 TOPSOIL  
ITEM 162 SODDING FOR EROSION CONTROL (166)(168)  
ITEM 164 SEEDING FOR EROSION CONTROL (162)(166)(168)  
ITEM 168 VEGETATIVE WATERING  
ITEM 169 SOIL RETENTION BLANKETS  
ITEM 180 WILDFLOWER SEEDING  
ITEM 192 LANDSCAPE PLANTING (161)(166)  
ITEM 193 LANDSCAPE ESTABLISHMENT (166)(192)  
ITEM 216 PROOF ROLLING (210)  
ITEM 247 FLEXIBLE BASE (105)(204)(210)(216)(520)  
ITEM 251 REWORKING BASE COURSES (210)(216)(247)(520)  
ITEM 276 CEMENT TREATMENT (PLANT-MIXED) (204)(210)(216)(247)(300)  
(310)(520)  
ITEM 305 SALVAGING, HAULING, AND STOCKPILING RECLAIMABLE ASPHALT  
PAVEMENT  
ITEM 310 PRIME COAT (300)(316)  
ITEM 316 SURFACE TREATMENTS (210)(300)(302)  
ITEM 360 CONCRETE PAVEMENT (300)(420)(421)(438)(440)(529)(585)  
ITEM 400 EXCAVATION AND BACKFILL FOR STRUCTURES (132)(401)(420)  
(421)  
ITEM 402 TRENCH EXCAVATION PROTECTION  
ITEM 403 TEMPORARY SPECIAL SHORING (423)  
ITEM 416 DRILLED SHAFT FOUNDATIONS (420)(421)(440)(448)  
ITEM 420 CONCRETE STRUCTURES (400)(404)(421)(426)(427)(438)(440)  
(441)(448)

ITEM 422 REINFORCED CONCRETE SLAB (420)(421)(424)(426)(430)(440)  
 ITEM 423 RETAINING WALLS (110)(132)(400)(420)(421)(424)(440)(445)  
 (458)(556)  
 ITEM 425 PRECAST PRESTRESSED CONCRETE STRUCTURAL MEMBERS (420)  
 (421)(424)(426)(427)(434)(440)(442)  
 ITEM 428 CONCRETE SURFACE TREATMENT (427)  
 ITEM 430 EXTENDING CONCRETE STRUCTURES (420)(421)(440)(448)  
 ITEM 432 RIPRAP (247)(420)(421)(427)(431)(440)  
 ITEM 434 ELASTOMERIC BRIDGE BEARINGS (420)(441)  
 ITEM 442 METAL FOR STRUCTURES (441)(445)(446)(447)(448)(449)  
 ITEM 450 RAILING (420)(421)(424)(440)(441)(442)(445)(446)(448)  
 (540)  
 ITEM 454 BRIDGE EXPANSION JOINTS (429)(442)  
 ITEM 462 CONCRETE BOX CULVERTS AND STORM DRAINS (400)(420)(421)  
 (424)(440)(464)(476)  
 ITEM 464 REINFORCED CONCRETE PIPE (400)(476)  
 ITEM 465 MANHOLES AND INLETS (400)(420)(421)(440)(471)  
 ITEM 466 HEADWALLS AND WINGWALLS (400)(420)(421)(430)(440)(464)  
 ITEM 467 SAFETY END TREATMENT (400)(420)(421)(430)(432)(440)(445)  
 (460)(464)  
 ITEM 471 FRAMES, GRATES, RINGS, AND COVERS (441)(445)(448)  
 ITEM 476 JACKING, BORING, OR TUNNELING PIPE OR BOX (460)(462)(464)  
 ITEM 479 ADJUSTING MANHOLES AND INLETS (400)(421)(465)  
 ITEM 481 PVC PIPE FOR DRAINS (400)  
 ITEM 500 MOBILIZATION  
 ITEM 502 BARRICADES, SIGNS, AND TRAFFIC HANDLING  
 ITEM 504 FIELD OFFICE AND LABORATORY  
 ITEM 506 TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL  
 CONTROLS (432)(556)  
 ITEM 508 CONSTRUCTING DETOURS  
 ITEM 512 PORTABLE CONCRETE TRAFFIC BARRIER (420)(421)(424)(440)  
 (442)  
 ITEM 528 COLOR TEXTURED CONCRETE AND LANDSCAPE PAVERS (132)(247)  
 (420)(421)(440)  
 ITEM 529 CONCRETE CURB, GUTTER, AND COMBINED CURB AND GUTTER (360)  
 (420)(421)(440)  
 ITEM 530 INTERSECTIONS, DRIVEWAYS, AND TURNOUTS (247)(260)(263)  
 (275)(276)(292)(316)(330)(334)(340)(360)(421)(440)  
 ITEM 531 SIDEWALKS (104)(360)(420)(421)(440)(530)  
 ITEM 540 METAL BEAM GUARD FENCE (421)(441)(445)(529)(542)(544)  
 ITEM 542 REMOVING METAL BEAM GUARD FENCE  
 ITEM 544 GUARDRAIL END TREATMENTS  
 ITEM 545 CRASH CUSHION ATTENUATORS (421)  
 ITEM 550 CHAIN LINK FENCE (421)(445)  
 ITEM 552 WIRE FENCE (445)(492)  
 ITEM 556 PIPE UNDERDRAINS (402)(432)  
 ITEM 560 MAILBOX ASSEMBLIES  
 ITEM 610 ROADWAY ILLUMINATION ASSEMBLIES (421)(441)(442)(445)(446)  
 (449)(616)(620)  
 ITEM 618 CONDUIT (400)(445)(476)(622)  
 ITEM 620 ELECTRICAL CONDUCTORS  
 ITEM 621 TRAY CABLE  
 ITEM 624 GROUND BOXES (420)(421)(432)(440)(618)(620)  
 ITEM 625 ZINC-COATED STEEL WIRE STRAND

ITEM 628 ELECTRICAL SERVICES (441)(445)(449)(618)(620)(627)(656)  
 ITEM 636 ALUMINUM SIGNS (643)  
 ITEM 644 SMALL ROADSIDE SIGN SUPPORTS AND ASSEMBLIES (421)(440)  
 (441)(442)(445)(634)(636)(643)(656)  
 ITEM 647 LARGE ROADSIDE SIGN SUPPORTS AND ASSEMBLIES (421)(440)  
 (441)(442)(445)(643)  
 ITEM 650 OVERHEAD SIGN SUPPORTS (416)(420)(421)(441)(442)(445)  
 (449)(618)  
 ITEM 658 DELINEATOR AND OBJECT MARKER ASSEMBLIES (445)  
 ITEM 662 WORK ZONE PAVEMENT MARKINGS (666)(668)(672)(677)  
 ITEM 666 REFLECTORIZED PAVEMENT MARKINGS (316)(318)(662)(677)(678)  
 ITEM 668 PREFABRICATED PAVEMENT MARKINGS  
 ITEM 672 RAISED PAVEMENT MARKERS (677)(678)  
 ITEM 677 ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS (300)  
 (302)(316)  
 ITEM 678 PAVEMENT SURFACE PREPARATION FOR MARKINGS (677)  
 ITEM 680 INSTALLATION OF HIGHWAY TRAFFIC SIGNALS (610)(625)(627)  
 (634)(636)(656)  
 ITEM 682 VEHICLE AND PEDESTRIAN SIGNAL HEADS  
 ITEM 684 TRAFFIC SIGNAL CABLES  
 ITEM 685 ROADSIDE FLASHING BEACON ASSEMBLIES (441)(442)(445)(449)  
 (656)(687)  
 ITEM 686 TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (416)(421)(441)  
 (442)(445)(449)  
 ITEM 730 ROADSIDE MOWING  
 ITEM 738 CLEANING AND SWEEPING HIGHWAYS  
 ITEM 740 GRAFFITI REMOVAL AND ANTI-GRAFFITI COATING (427)(446)  
 ITEM 751 LANDSCAPE MAINTENANCE

SPECIAL PROVISIONS: SPECIAL PROVISIONS WILL GOVERN AND TAKE  
 ----- PRECEDENCE OVER THE SPECIFICATIONS ENUMERATED  
 HEREON WHEREVER IN CONFLICT THEREWITH.

REQUIRED CONTRACT PROVISIONS, FEDERAL-AID CONSTRUCTION CONTRACTS  
 (FORM FHWA 1273, MARCH 1994)

#### WAGE RATES

SPECIAL PROVISION "PARTNERING" (000--002)  
 SPECIAL PROVISION "NOTICE TO ALL BIDDERS" (000--003)  
 SPECIAL PROVISION "NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO  
 ENSURE EQUAL EMPLOYMENT OPPORTUNITY" (000--004)  
 SPECIAL PROVISION "STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY  
 CONSTRUCTION CONTRACT SPECIFICATIONS" (000--006)  
 SPECIAL PROVISION "CERTIFICATION OF NONDISCRIMINATION IN EMPLOYMENT"  
 (000--009)  
 SPECIAL PROVISION "DEPARTMENT DIVISION MAILING AND PHYSICAL ADDRESS"  
 (000--011)  
 SPECIAL PROVISION "NOTICE OF CHANGES TO U.S. DEPARTMENT OF LABOR  
 REQUIRED PAYROLL INFORMATION" (000--1483)  
 SPECIAL PROVISION "SCHEDULE OF LIQUIDATED DAMAGES" (000--1493)  
 SPECIAL PROVISION "ON-THE-JOB TRAINING PROGRAM" (000--1676)  
 SPECIAL PROVISION "DISADVANTAGED BUSINESS ENTERPRISE IN FEDERAL AID  
 CONTRACTS" (000--1966)

SPECIAL PROVISION	"IMPORTANT NOTICE TO CONTRACTOR"	(000--2178)
SPECIAL PROVISION	TO ITEM 1	(001---017)
SPECIAL PROVISION	TO ITEM 2	(002---032)
SPECIAL PROVISION	TO ITEM 3	(003---039)
SPECIAL PROVISION	TO ITEM 4	(004---017)
SPECIAL PROVISION	TO ITEM 5	(005---004)
SPECIAL PROVISION	TO ITEM 6	(006---030)
SPECIAL PROVISION	TO ITEM 7	(007---806)
SPECIAL PROVISIONS	TO ITEM 8	(008---006)(008---119)
SPECIAL PROVISIONS	TO ITEM 9	(009---009)(009---015)
SPECIAL PROVISION	TO ITEM 100	(100---002)
SPECIAL PROVISION	TO ITEM 161	(161---006)
SPECIAL PROVISION	TO ITEM 164	(164---004)
SPECIAL PROVISION	TO ITEM 166	(166---001)
SPECIAL PROVISION	TO ITEM 169	(169---002)
SPECIAL PROVISION	TO ITEM 247	(247---040)
SPECIAL PROVISION	TO ITEM 260	(260---002)
SPECIAL PROVISION	TO ITEM 275	(275---002)
SPECIAL PROVISION	TO ITEM 300	(300---032)
SPECIAL PROVISION	TO ITEM 302	(302---010)
SPECIAL PROVISION	TO ITEM 316	(316---016)
SPECIAL PROVISION	TO ITEM 318	(318---010)
SPECIAL PROVISION	TO ITEM 330	(330---001)
SPECIAL PROVISION	TO ITEM 340	(340---003)
SPECIAL PROVISION	TO ITEM 360	(360---003)
SPECIAL PROVISION	TO ITEM 416	(416---001)
SPECIAL PROVISION	TO ITEM 420	(420---002)
SPECIAL PROVISION	TO ITEM 421	(421---035)
SPECIAL PROVISION	TO ITEM 424	(424---002)
SPECIAL PROVISION	TO ITEM 425	(425---001)
SPECIAL PROVISION	TO ITEM 428	(428---001)
SPECIAL PROVISION	TO ITEM 429	(429---008)
SPECIAL PROVISION	TO ITEM 431	(431---001)
SPECIAL PROVISION	TO ITEM 434	(434---003)
SPECIAL PROVISION	TO ITEM 440	(440---003)
SPECIAL PROVISION	TO ITEM 441	(441---006)
SPECIAL PROVISION	TO ITEM 442	(442---016)
SPECIAL PROVISION	TO ITEM 447	(447---002)
SPECIAL PROVISION	TO ITEM 448	(448---002)
SPECIAL PROVISION	TO ITEM 450	(450---001)
SPECIAL PROVISION	TO ITEM 464	(464---003)
SPECIAL PROVISION	TO ITEM 465	(465---001)
SPECIAL PROVISION	TO ITEM 492	(492---001)
SPECIAL PROVISION	TO ITEM 500	(500---005)
SPECIAL PROVISION	TO ITEM 502	(502---033)
SPECIAL PROVISION	TO ITEM 506	(506---011)
SPECIAL PROVISION	TO ITEM 512	(512---002)
SPECIAL PROVISION	TO ITEM 540	(540---023)
SPECIAL PROVISION	TO ITEM 544	(544---001)
SPECIAL PROVISION	TO ITEM 560	(560---001)
SPECIAL PROVISION	TO ITEM 610	(610---010)
SPECIAL PROVISION	TO ITEM 620	(620---001)
SPECIAL PROVISION	TO ITEM 624	(624---014)
SPECIAL PROVISION	TO ITEM 625	(625---001)

SPECIAL PROVISION	TO ITEM	628	(628---001)
SPECIAL PROVISION	TO ITEM	636	(636---014)
SPECIAL PROVISION	TO ITEM	643	(643---001)
SPECIAL PROVISION	TO ITEM	672	(672---034)
SPECIAL PROVISION	TO ITEM	682	(682---001)
SPECIAL PROVISION	TO ITEM	685	(685---014)
SPECIAL PROVISION	TO ITEM	687	(687---004)
SPECIAL PROVISION	TO ITEM	730	(730---003)
SPECIAL PROVISION	TO ITEM	740	(740---001)
SPECIAL PROVISION	TO SPECIAL SPECIFICATION ITEM	6266	(6266--017)
SPECIAL PROVISION	TO SPECIAL SPECIFICATION ITEM	6473	(6473--001)

SPECIAL SPECIFICATIONS:

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ITEM 3224 DENSE-GRADED HOT-MIX ASPHALT (QC/QA) (300)(301)(320)(520)  
(585)

ITEM 4118 ROCK NAIL ANCHORS (421)(440)

ITEM 5049 BIODEGRADABLE EROSION CONTROL LOGS (161)(506)

ITEM 5369 CENTERLINE TEXTURING

ITEM 5777 WATER DISTRIBUTION (CITY OF COPPERAS COVE)

ITEM 5779 SANITARY SEWERS AND FORCE MAINS (CITY OF COPPERAS COVE)

ITEM 6006 SPREAD SPECTRUM RADIOS FOR TRAFFIC SIGNALS

ITEM 6007 REMOVING TRAFFIC SIGNALS

ITEM 6266 VIDEO IMAGING VEHICLE DETECTION SYSTEM

ITEM 6473 MULTIPOLYMER PAVEMENT MARKING S (MPM) (677)(678)(8094)

ITEM 6834 PORTABLE CHANGEABLE MESSAGE SIGN

ITEM 8094 MOBILE RETROREFLECTIVITY DATA COLLECTION FOR PAVEMENT  
MARKINGS

ITEM 8403 REMOVING HDPE DUCT BANK AND (110)(132)

ITEM 8615 RADAR ADVANCE DETECTION DEVICES

GENERAL: THE ABOVE-LISTED SPECIFICATION ITEMS ARE THOSE UNDER WHICH  
----- PAYMENT IS TO BE MADE. THESE, TOGETHER WITH SUCH OTHER  
PERTINENT ITEMS, IF ANY, AS MAY BE REFERRED TO IN THE ABOVE-  
LISTED SPECIFICATION ITEMS, AND INCLUDING THE SPECIAL  
PROVISIONS LISTED ABOVE, CONSTITUTE THE COMPLETE SPECIFI-  
CATIONS FOR THIS PROJECT.